USDA

United States
Department of
Agriculture

US Forest
Service

December 2010

Three Trails OHV Project and Forest Plan Amendments

Record of Decision

Crescent Ranger District, Deschutes National Forest,
Klamath County, Oregon

Townships 23, 24, 25, 26 South and Ranges 6, 7, 8, 9 East
Willamette Meridian

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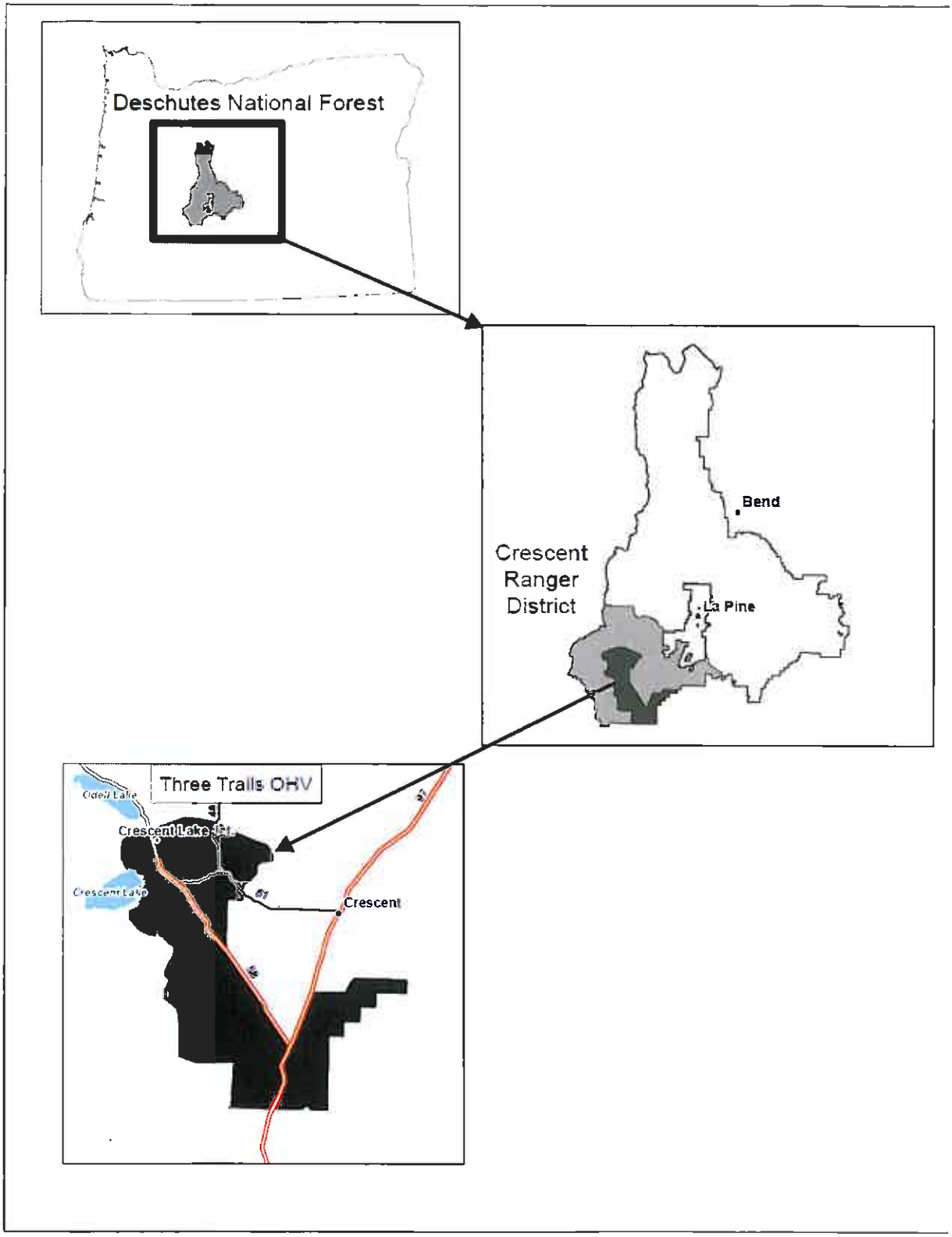

Figure 1. Location of the Three Trails OHV Project Area

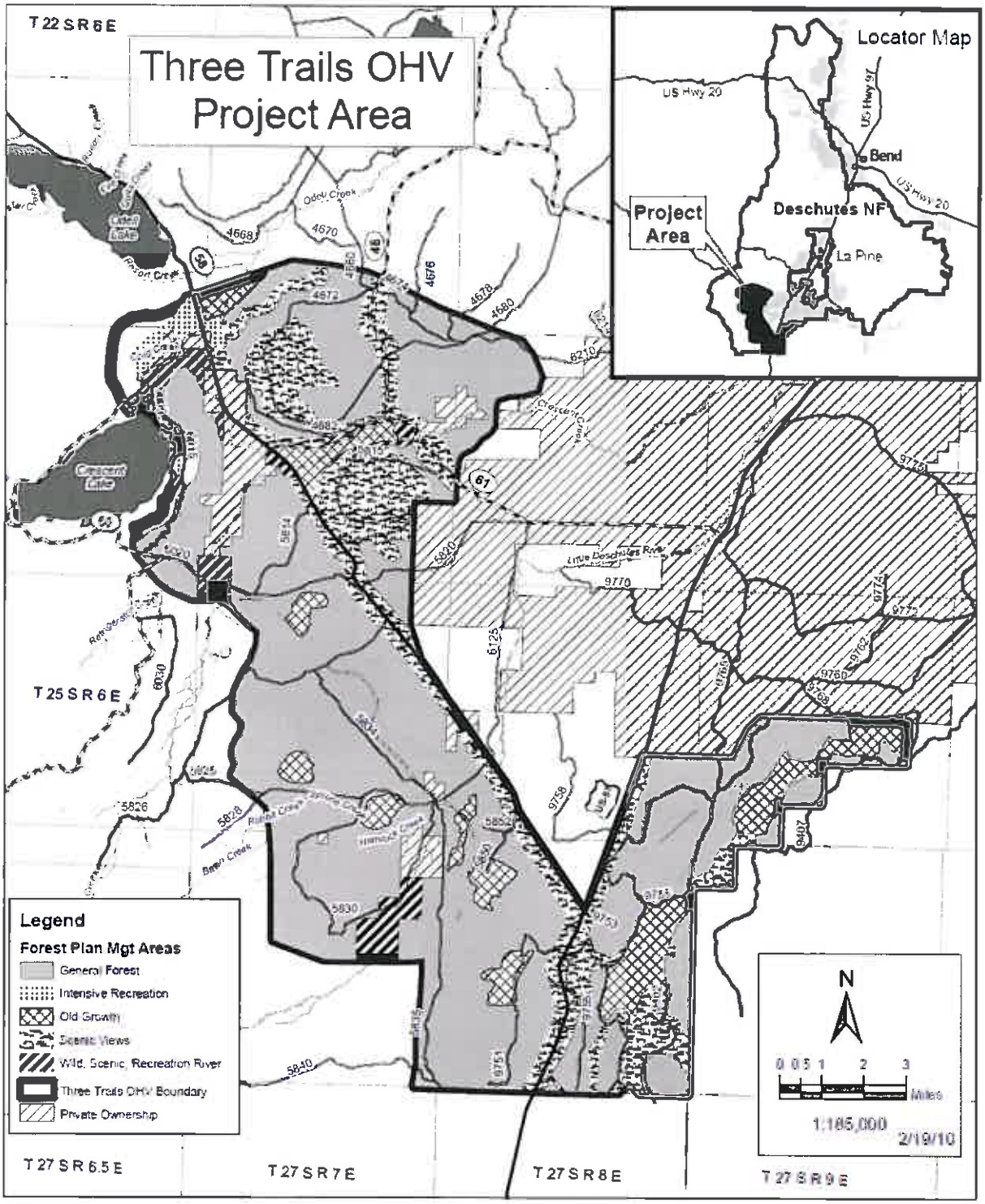

Figure 2. Forest Plan Management Allocations within the Three Trails OHV Project Area

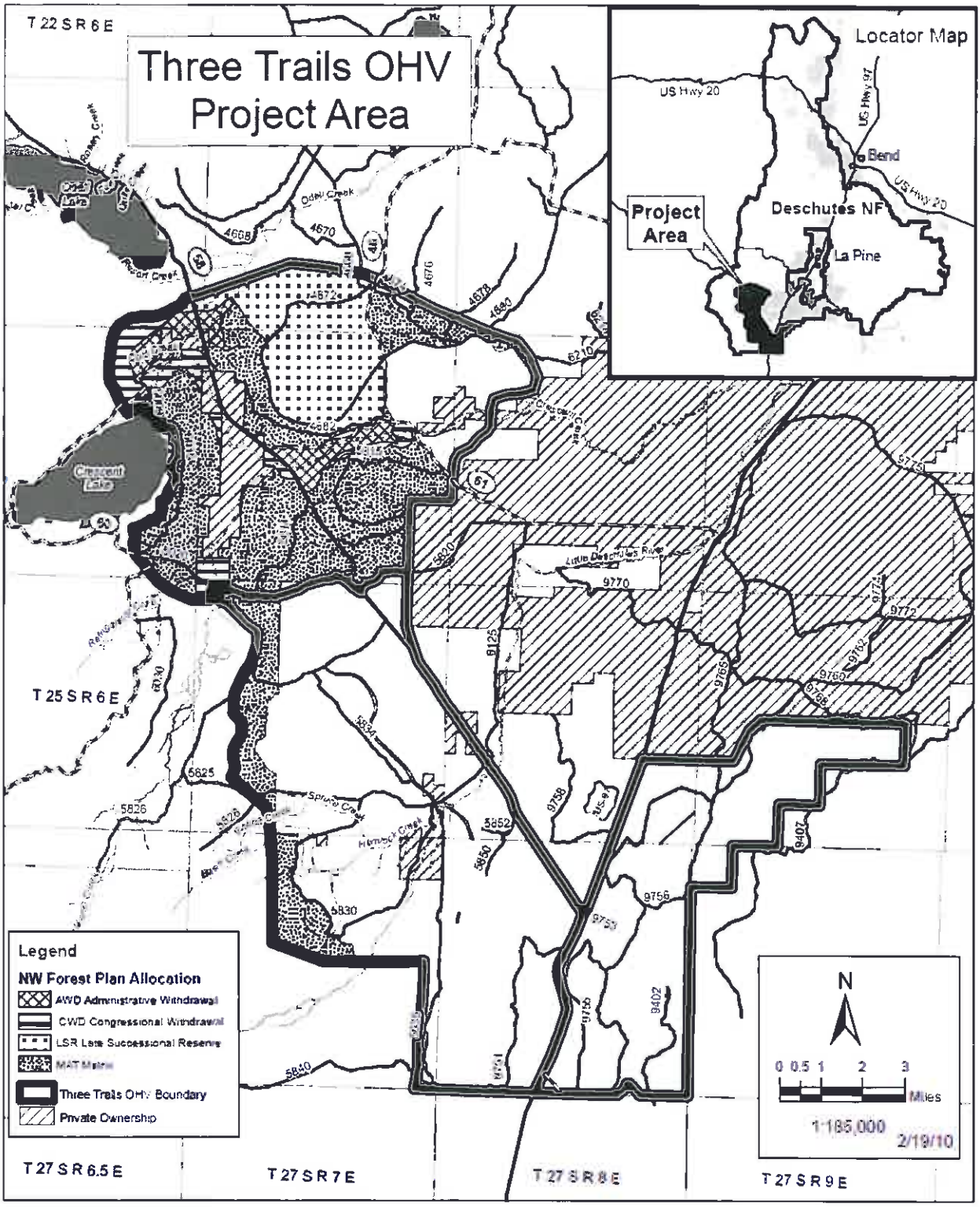

Figure 3. Northwest Forest Plan Land Allocations within the Three Trails OHV Project Area

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Three Trails OHV Project

USDA Forest Service
Crescent Ranger District, Deschutes National Forest
Klamath County, Oregon
Townships 23, 24, 25, 26 South and Ranges 6, 7, 8, 9 East, Willamette Meridian

Decision Summary and Rationale

This Record of Decision (ROD) documents my decision and rationale for the selection of **Alternative E**, described in the August 2010 Draft Environmental Impact Statement (EIS) titled *Three Trails OHV Project*. My decision is to select Alternative E in its entirety, including the associated resource protection, mitigation measures, and monitoring starting on page 53 of the FEIS. It provides the best balance and offers the scenery, challenge, and "saddle time" riders seek, while caring for the resources and providing for other non-motorized pursuits. For more detailed rationale, see page 13 of this document. My conclusion is based on a review of the record, which shows a thorough evaluation of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. At the end of Response to Comments (Appendix C) is a table that describes how I considered science.

Through an extensive public process, the Crescent Ranger District has identified locations for a motorized trail system where there is general public support. This project is needed because currently there is an extensive network of user-created trails in three main areas on the District that have been expanding for many years. The State of Oregon has also identified the Three Trails OHV Project Area as a place where more OHV trails are needed for the region (The Oregon Trails 2005-2014; A Statewide Action Plan). Therefore, I selected the balance that offers the scenery, challenge, and "saddle time" riders seek, while caring for the resources and providing for other non-motorized pursuits. This includes offsetting the effects of the designated trail system with road closures and rehabilitation of user-created trails in addition to putting the designated system in the best place. Cross-country travel within the project area will be eliminated except in play areas.

The motorized trails are basically engineered to direct existing use to places on the landscape that are suitable for motor vehicle travel while sustaining important watershed functions such as water quality and wildlife habitat for an array of species. While protecting resources, the trail system provides opportunities for appropriate and reasonable access to the National Forest System lands. The routes generally avoid water except where crossings designed for motorized travel already exist. The designated trail system was designed to protect sensitive resources such as cultural resources and important areas where harvesters depend on matsutake production. Local communities should benefit from the linkage of the trail system to local businesses, especially at Crescent Lake Junction.

In summary, my decision includes adoption of some appropriately located user-created trails and new construction for a total of 142 miles of trail plus 80 miles of connecting high clearance roads for a total 222 route miles. This includes 21 miles of trails engineered for Jeeps and other 4-wheel drive vehicles. There are four strategically-placed staging areas in Junction, Rivers, and Walker trail segments. It incorporates most of the design features that the riders requested (longer loops, interconnected trail systems, access to public goods and services). It also provides some tighter loops in some areas and avoids an extensive trail system where big game migration corridors are more likely to occur. Motorized and non-motorized uses are separated as much as possible on the Metolius-

Windigo Trail. It incorporates five scenic viewpoints. There is foot trail access to water along the Little Deschutes River; however no new bridges will be constructed. A season of use will generally be from May 1 to October 31, dependent upon site-specific conditions.

Alternative E Associated Actions

In order for Alternative E to be implemented, the following are associated activities:

- About five miles of currently closed Maintenance Level 1 roads will be opened and used for OHV routes for all classes of vehicles.
- About 115 miles of currently open Maintenance Level 2 roads will be closed (changed to Maintenance Level 1) to offset effects of designation of motorized trails. All Maintenance Level 1 roads would remain open for administrative access.
- About 43 miles of currently open Maintenance Level 2 roads will be converted to trails; of those 11 miles will be for Class II and 32 miles for Classes I and III.
- About 94 miles of user-created trails that are located in inappropriate areas and/or redundant, will be closed and rehabilitated.
- About 80 miles of shared use roads for all classes of vehicles.
- Motorized and non-motorized uses will be separated as much as possible except in wet areas (riparian reserves/Riparian Habitat Conservation Areas) of the two-mile stretch of the Metolius-Windigo trail, by creating parallel trails wherever possible. Equestrians, hikers, mountain bikers, and motorized users will continue to share portions of the trail due to limited options caused by terrain, land ownership, and proper riparian function of the wet areas. Signing will be used to encourage respectful behavior by all users.
- An underpass for Highway 97 that links the Rivers and Walker segments for all types of vehicles will be designed to accommodate big game and smaller wildlife species as well.
- To offset a potential decrease in availability to an existing wildlife guzzler because of the designated trail system, a new wildlife guzzler installed on Walker Mountain.
- A day use parking area with non-motorized trail to the Little Deschutes River would be constructed to replace motorized access that occurs now.
- A railroad crossing south of 5825 road for all types of vehicles.

Rehabilitation of user-created trails and identification of the appropriate motorized access is a key component of my decision. This decision establishes the minimum road system needed for safe and efficient travel for administration, utilization, and protection of National Forest System lands per 36 CFR 212.5(b), and has informed my decision related to the designation of roads, trails, and areas for motor vehicle use per 36 CFR 212.51 within the 93,016-acre project area.

This project benefits the function of the 16 subwatersheds in the following ways:

- The effects of motorized route creation of 142 miles of trails are more than offset with closure of about 115 miles of currently open Maintenance Level 2 roads and rehabilitation of 94 miles of user-created trails.
- Total open road density on National Forest System Roads drops from 3.8 to 2.0 miles per square mile averaged over 16 subwatersheds (FEIS, Table 82). The target open road density in the Forest Plan for big game in summer range is 2.5 miles per square mile (WL-53). When motorized trails are included in this average, the total is 2.5 miles per square mile.
- User-created motorized access that is on the banks of the Little Deschutes River will be moved and replaced. Those that traditionally used these areas can now camp in the same places, but motorized access and parking has been moved away from water to nearby designated parking areas. Access to the water is maintained through non-motorized trails.

Another part of my decision is to amend the 1990 Deschutes National Forest Land and Resource Management Plan with four site specific amendments. Two of them will allow designation of a motorized trail system in the Intensive Recreation Management Area in the Crescent Lake Junction Area. Right now, Standard and Guideline M11- 40 (p. 4 -138) states "off-highway vehicles will normally not be encouraged in the Management Area, especially in areas where recreation use is concentrated." The amendment will authorize Class I and III (ATV and motorcycles) off-highway vehicle use on designating trails (including snowmobile trails) that radiate from an existing Sno-Park as a staging area.

I believe this amendment will not change the way the area is currently being used. Both motorized and non-motorized users have been sharing the only logical route on public lands as a travel corridor to Highway 58 and to access local businesses. Bordered by private land, railroads tracks, and crossing the end of an airport landing strip, the Recreational Opportunity Spectrum (ROS) is classified as "Roaded Natural" (Appendix 2, LRMP). The Forest Plan explains "this area is characterized by predominately natural-appearing environment with moderate evidence of sights and sounds of humans. Interaction among users may be low to moderate, but with evidence of other users prevalent." I do not expect the ROS to change, even with an expected increase in motorized visitation of 2.5 to 5.6 percent over the next decade. I expect non-motorized visitation in this area to remain fairly static.

There are very limited opportunities for staging motorized use in the Crescent Lake Junction segment that link up to the trail system. By amending the plan, we can utilize a Sno-Park constructed for winter motorized use in a strategic location that is already developed and receives little use in the summer. Appropriate signing, education, and separation of the trail system (where possible) will go far in helping users share and stay safe as they use the Metolius-Windigo Trail, cross the end of the landing strip, and travel under the highway.

Another amendment will change the location of the Old Growth (MA-15) designation from Muttonchop Butte to a large block of mixed conifer habitat better suited for focal species goshawk and American marten near the Oregon Cascade Recreation Area boundary (Figures 6 and 7). Currently, approximately five acres of a mineral source (pit) overlaps the 361-acre management area and it is extensively used as a "play area" for off highway vehicles. Being immediately adjacent to the Two Rivers North subdivision, there is a relatively high concentration of road and trail densities associated with the pit play area radiating from the private property. In addition, about 80 acres experienced a recent stand replacement wildfire. Disturbance and loss of vegetation has resulted in poor quality habitat conditions for mixed conifer-related old growth dependent wildlife species.

By moving the Old Growth area to a location with fewer disturbances closer to the Oregon Cascade Recreation Area within the Northwest Forest Plan, we will provide more suitable mixed conifer habitat, plus retain a very popular riding area and recreational experience. Under the Northwest Forest Plan allocation of Matrix it would revert to Administratively Withdrawn.

Because the top of the butte is highly noticeable, especially to local residents, the management allocation will change from Old Growth to emphasize scenic integrity (Partial Retention), in addition to rehabilitation of many redundant trails on the butte. The remaining lower portion will change to General Forest. With the incorporation of measures to dampen noise on the butte, especially during the nighttime, the area will continue to provide habitat for the focal species. Reference the Old Growth discussion in Chapter 3 in the FEIS for more details.

Finally, I have decided to move the Key Elk area that is very important for elk calving, thermal, and hiding cover to shift the boundaries away from the Two Rivers North subdivision. The change will

increase the stringer meadows available for foraging and calving. The change will also reduce the Forest Service open road densities from 2.1 to 0.7 miles per square mile. Standard and Guideline WL-46 supports this action: "Open road densities should not exceed an overall average between 0.5-1.5 miles per square mile within each key area, unless impacts on elk can be avoided, or the proposed project will result in a net benefit to elk habitat." This will also bring Standard and Guideline WL-45 (p. 4-56) into relevance: "Where management will encourage public use of travel ways outside the area if a conflict with elk use occurs, and elk habitat improvements must be compatible with recreation and visual objectives." The overall acreage of the Key Elk area will stay the same. The Rocky Mountain Elk Foundation has expressed support for this adjustment. Reference Chapter 3 of the FEIS titled Big Game and Old Growth for more details.

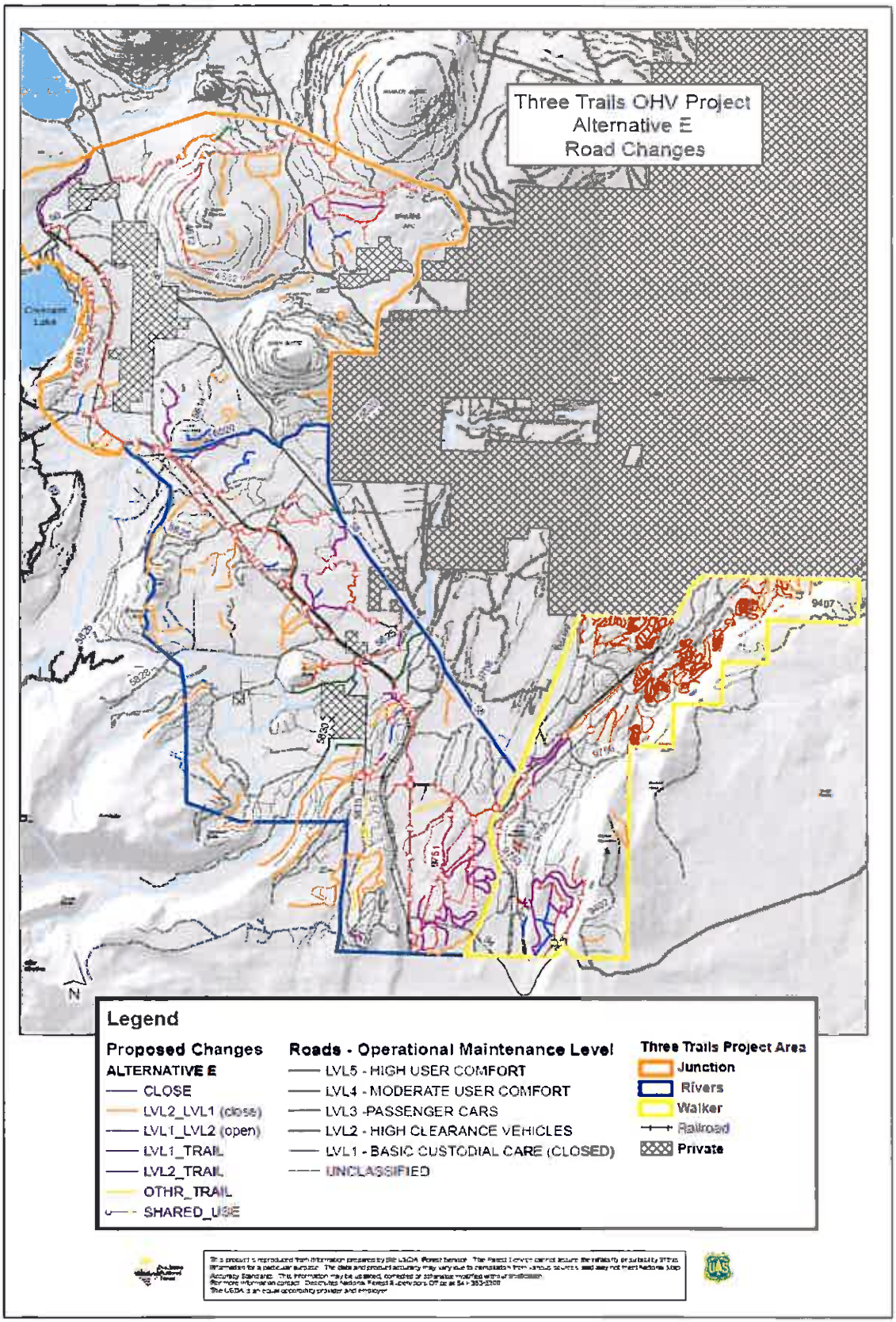

Figure 4. Alternative E Roads

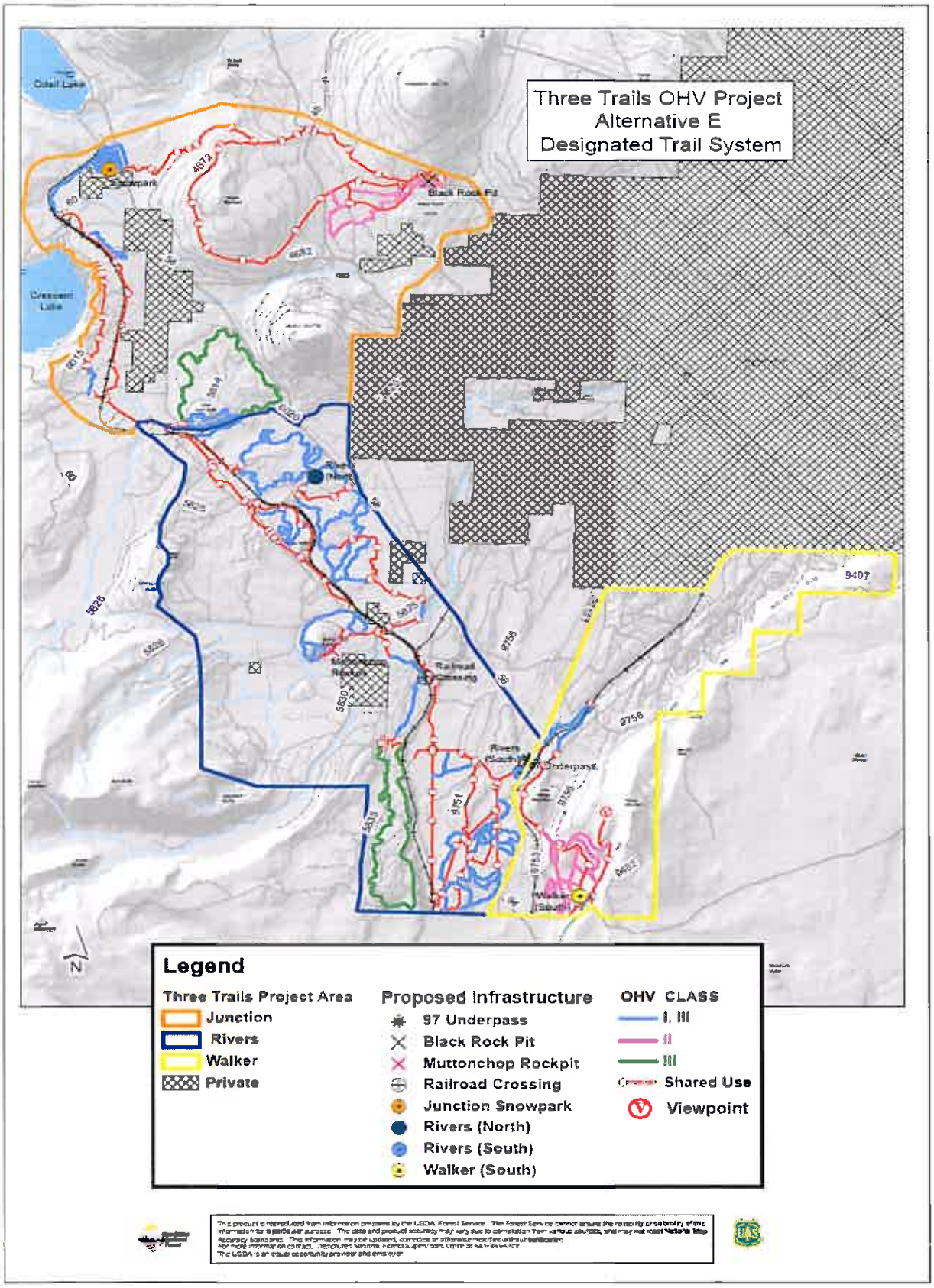

Figure 5. Alternative E Trails

Project Background and Need

The National Forests are lands where the public enjoys many forms of motorized and non-motorized recreation. Nearly all Forest visitors use vehicles to get to their preferred activities and settings, whether it is a hiking or equestrian trailhead, a fishing spot, or a favorite campsite. For many people, their vehicle is just the mode of transportation used to access their recreational activity. For others, the vehicle use itself is the activity.

Currently, there is no designated motorized trail system for OHVs on the Crescent Ranger District. To obtain feedback prior to and following release of the Proposed Action, the Project team held a series of public meetings in the central Oregon area and traveled to the communities of Eugene, Klamath Falls, McMinnville, and Prineville. Those meetings were well attended and there was a strong indication that riders wanted a sound-designed trail system on the Crescent Ranger District. This confirmed the evidence we have seen on the ground. Using estimates from law enforcement, resorts, local staff, and riders themselves, it is estimated we have up to 200 riders during prime weekends especially in the Rivers and Junction segments of the project area. It is logical and reasonable to accommodate and direct that use to the most suitable and sustainable locations.

Public Involvement

I wanted every opportunity for interested people to weigh in on this project. Motorized access to the National Forest lands is a subject of strong and often polarized public expression. As mentioned earlier, the Three Trails OHV Project team held a series of public meetings in central Oregon and beyond to gauge what users of the National Forest think about a designated trail system on the Crescent Ranger District. A public scoping letter was mailed on January 27, 2009. Also, a diverse group of multi-party stakeholders (formerly the federally-chartered Deschutes Provincial Advisory Committee) toured the project area on September 14, 2010. Many thoughts from users of public lands were received and addressed in the Draft Environmental Impact Statement. Through these series of contacts, a cadre of potential volunteers was also identified to help design, maintain, and monitor a designated trail system in whatever form may result at the end of the public process and when a decision is made.

The Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for Three Trails OHV project was published in the *Federal Register* on February 25, 2009. In addition to the NOI, the Crescent District Ranger requested feedback on the alternatives in an August 05, 2009 letter updating interested parties about the progress of Three Trails. Early in the process, a link from Central Oregon forest website was established and maintained (http://www.fs.fed.us/r6/centraloregon/projects/units/crescent/index.shtml).

A 45-day comment period for the Project Draft Environmental Impact Statement (DEIS) was provided for interested and affected members of the public, including appropriate local, state, federal government agencies, and American Indian Tribes. This period started with Notice of Availability in the Federal Register on October 1, 2010 and published in *The Bulletin*, the newspaper of record on October 7, 2010. The public comment period ended on November 15, 2010. During this period, the Forest Service received comments from different sectors of the public, with a range of concerns and questions. Some comments resulted in a clarification of discussions within the DEIS. I have reviewed and considered the comments in the decision-making process. All comments were reviewed and substantive comments received the focus during this comment analysis. The complete comment records are kept within the Three Trails OHV Project public record and are available for review at the Crescent Ranger District, Crescent, Oregon. Reference the heading "Consideration of Public Comment" of this document and Appendix C of the FEIS to see how I considered the comments.

Consultation with the Tribes

The proposed action was presented in a letter dated January 28, 2009 (prior to general public release) to the Tribal Chairs and their Cultural Resource Program Managers. Although the Forest Service has received no response to solicited person-to-person contact and written documentation, it was assumed The Klamath Tribes will have an interest in potential disturbance to sacred sites on Walker Rim and sounds that are considered intrusions to ceremonies held at those sites. To respond, the project design has avoided placement of a trail system in direct proximity to known sites and a distance of at least 0.89 miles[1] was used to dampen the sounds of engines on the designated routes.

Consultation with Government Agencies

Informal coordination has occurred with federal, state, and local government officials (Chapter 4, FEIS). Active collaboration with the Oregon Department of Fish and Wildlife aided the Interdisciplinary Team in their assessment of effects and in designing alternatives that respond to big game movement in the Walker Rim and Junction segments.

Based on information contained within the Biological Assessment, meetings and conversation with Forest Service staff, the US Fish and Wildlife Service (USFWS) concurs with the Forest Service's determination for Alternative E that the project is not likely to adversely affect spotted owl or spotted owl critical habitat. The following rationale was provided:

1. There will be no new road (jeep trail) or trail construction or creation of staging areas within stands of suitable habitat or spotted owl home ranges.
2. The project will not remove suitable habitat for spotted owl.
3. Spotted owl surveys have been conducted in the project area since 2001. Disturbance to known nest sites is not anticipated.
4. Project implementation will reduce the amount of disturbed suitable habitat.
5. Although there may be an increase in motorized use of open routes of 2.5 to 5.6 percent a year, the use of open routes will not be an additive effect to spotted owls since the zone of disturbance already exists.
6. Spotted owl foraging habitat adjacent to open motorized routes may be disrupted. However, there is ample foraging habitat in the project area to support spotted owl foraging requirements.
7. Spotted owls are highly unlikely to nest in suitable habitat within 660 feet disturbance buffer open to motorized routes.
8. No primary constituent elements of spotted owl critical habitat will be removed through implementation of this project.
9. No roads or trails will be constructed within the Critical Habitat Unit.
10. Project implementation will reduce the amount of suitable habitat subject to disturbance along motorized routes from 1,362 (85%) to 595 (37%) acres.
11. Project implementation will reduce the acreage of dispersal habitat subject to disturbance from 2,346 (77%) to 754 (25%) acres.

The Environmental Protection Agency (EPA) follow-up letter to their scoping letter was supportive of the transparency with stakeholders and proposed closure of some user-created trails. Also, the agency

[1] Research and on-the-ground sound testing in the project area indicated that sound dampens at this distance from the source to a level that cannot be heard by most people. Reference the methodology and testing discussions in Recreation, Chapter 3 for more information.

favored alternatives that addressed noise and potential conflicts with other non-motorized users, for which Alternative E responds (Recreation, Chapter 3, FEIS). They also encouraged the Forest Service to address potential threats to adjacent wetlands. To respond, Project Design Features were added wherever the trail routes are adjacent to fens or wetlands. Structures such as split rail fencing or boulders will be utilized to define the boundaries of the designated trail system. On November 15, 2010, the EPA's review of the DEIS identified questions and areas of concern to be addressed in the Final EIS. Their primary concern was the scope of the proposed project and wanted to be sure the trail system is appropriately sized. The trail system was designed for the use that is occurring now, plus anticipated trends for riders in the future. As the Forest Service implements the decision, it will be constructed in sequences dependent upon budget (including grants) and available personnel (including volunteers). A complete response to comments is listed in Appendix C and a Forest Service response to the EPA letter is in Appendix D.

I have also consulted with the Oregon State Historic Preservation Office. We have met our National Historic Preservation Act obligations and reached concurrence. Following guidelines in a 2003 Regional Programmatic Agreement (PA) among USDA-Forest Service, the Advisory Council on Historic Preservation, and the Oregon State Historic Preservation Office (SHPO), a finding of "*No Adverse Effect*" (No Historic Properties Affected) was determined under Stipulation III(B)5 of the Programmatic Agreement. The Forest finds that there are historic properties but the undertaking would have no adverse effect on them as defined by 36 CFR 800.16(i). Any potential information that would otherwise be lost would be documented and reported to the SHPO. This finding is based on Project Design Features and Mitigation Measures that have been incorporated to determine the eligibility of unevaluated sites prior to trail construction. This would be accomplished through a series of treatment, data collection, and trail rehabilitation measures to document potential character defining features of the site. For those sites that may be eligible and are already being traversed from user-created trails through or adjacent to the site, Mitigation Measures would include site protection of the remaining portion adjacent to the route, data recovery, and/or avoidance. Protection is not required for those sites that are evaluated and found not eligible.

Other Alternatives Considered in Detail

In addition to Alternative E, four action alternatives and a "No Action" alternative were analyzed. Several alternatives were considered in the FEIS and "eliminated from detailed consideration" (FEIS, page 60). The four action alternatives considered in the FEIS were developed to address the key issues and examine different combinations of activities. For additional details on these alternatives, see the FEIS (Chapter 2, Alternatives B, C, D, and E).

Alternative A – No Action

The No Action Alternative is included as a baseline comparison of continuing the existing conditions without implementing the proposed actions as required by the CEQ Regulations (40 CFR 1502.14). Motorized access will remain in its current condition with cross-country travel virtually across the entire project area. Enforcement of existing restrictions found in the Deschutes National Forest Plan and site-specific decisions will continue. This includes past decisions to close or decommission National Forest system roads that may not have been implemented through physical barriers or signing, or where the closure method was limited to obstruction by a passive maintenance strategy. At this time, there will be no change to existing designated routes for the class of vehicle that could use the routes. There will be no Forest Plan amendments to move Old Growth or Key Elk areas to allow them to better function for the species for which they were intended or encouraging motorized use in the Intensive Recreation Management Area.

Alternative A will maintain the status quo within the project area. Although user-created trails typically take advantage of existing areas of disturbance, herbaceous cover will continue to be removed as trail systems and parking areas expand. It is estimated the user-created trail system has expanded at least two to five miles on a yearly basis since the early 1990s when OHVs became popular in the project area.

This alternative was not selected because it does not meet the Purpose and Need for a designated trail system where there is some community support on the Crescent Ranger District in a suitable and sustainable location while considering other forest uses. Several commenters would like to keep the status quo and have unrestricted motorized cross-country travel. Once the Travel Management Rule is in place, there would be no opportunities to ride motorized vehicles other than on open roads on the Crescent Ranger District. It also does not amend the Forest Plan for moving the Muttonchop Old Growth or modifying the Key Elk areas; both of which are intended benefits for the species they serve, regardless of the motorized trail system.

Alternative B

Proposed Action

The Proposed Action will provide approximately 143 miles of trails in three main areas (Junction, Rivers, and Walker) with associated staging areas. The trail system will vary in skill level and density to match terrain and the design of the staging areas, it will be linked to shared use roads, it will include a railroad crossing, and an underpass on Highway 97 near the Highway 58 junction. Where redundant access exists or user-created trails are in sensitive areas (riparian or desired wildlife habitat), closure and rehabilitation/restoration will occur. The trail system will be implemented in phases dependent upon budget and other resources and a general season of use will be May 1 through October 31.

The proposed action will provide trail systems for all three classes of OHVs. They are classified into three standard categories:

Class I: (ATVs, three-wheelers and quads) vehicles 50 inches wide or less and dry weight of 800 pounds or less, have a saddle or seat, and travel on three or four tires.
Class II: vehicles (jeeps or other 4-wheel drive vehicles) more than 50 inches wide or having a dry weight of more than 800 pounds, but less the 8,000 pounds.
Class III: vehicles (motorcycles) riding on two tires with a dry weight of less than 600 pounds.

Alternative B Associated Actions

In order for Alternative B to be implemented, the following are associated actions:

- About five miles of currently closed Maintenance Level 1 roads would be opened and used for OHV routes for all classes of vehicles.
- About 41 miles of currently open Maintenance Level 2 roads would be closed (changed to Maintenance Level 1) to offset effects of the designated trail system. All Maintenance Level 1 roads would remain open for administrative access.
- About 12 miles of Maintenance Level 1 and 2 roads would be converted to trail for Class I and III vehicles and eight miles for Class II vehicles.
- About 56 miles of user-created trails that are either located in inappropriate areas and/or are redundant would be closed and rehabilitated.
- About 56 miles of shared use roads for all classes of vehicles.
- An underpass for Highway 97 that links the Rivers and Walker segments.
- A new wildlife guzzler installed on Walker Mountain.
- Railroad crossing south of 5825 road.

This alternative was not selected because it does not have the proper design to provide the recreational experience riders want. I heard from riders and they indicated they wanted a trail system better designed and engineered to provide more of a quality experience. This includes a trail system that offers a varying degree of difficulty plus more play areas, a quality camping experience, and additional trail access to scenery. They also wanted a more diverse system that offered opportunities for Class II vehicles.

Also, the design of Alternative B does not afford the balance for effectiveness of mule deer and elk summer range, calving/fawning areas, and migration corridors. It also does not address concerns for shared motorized and non-motorized uses on the Metolius-Windigo trail, or offer a solution for safety.

Alternative C

This alternative responds to Key Issue #1 by providing a greater emphasize on rider's recreational experience. It also responds to Key Issue #4 by separating uses as much as possible on the Metolius-Windigo Trail. Alternative C uses a basic design from Alternative B by incorporating an interlinking trail system that accesses Crescent Lake businesses with a network of six strategically placed staging areas in the three segments (Junction, Rivers, and Walker). Ten miles of additional trail was added in more interesting terrain that accesses play areas at Black Rock and Muttonchop Butte Pits, as well as providing scenic vistas on Little Odell Butte, Black Rock, Royce Mountain, Railroad Ridge, Muttonchop Butte, and Walker Mountain. It offers longer rides with shorter loops back to the three hubs. As in all action alternatives, access to water is provided along the Little Deschutes River where riders can park and have a short walk down to the river. However, in this alternative only, riders can traverse the river on a bridge designed specifically for ATVs or motorcycles. Non-motorized users can access the bridge as well. This alternative has approximately 153 miles of trails, including 53 miles of roads converted to trails[2], 118 miles of shared use[3] routes and 327 miles of Maintenance Level 2 roads (for high clearance vehicles) available for motorized use. Total route miles including shared use and engineered trails is 271 miles.

Alternative C Associated Actions

In order for Alternative C to be implemented, the following are associated actions:

- About five miles of currently closed Maintenance Level 1 roads would be opened and used for the OHV routes for all classes of vehicles.
- About 108 miles of currently open Maintenance Level 2 roads would be closed (changed to Maintenance Level 1) to offset the effects of a designated motorized trail system. All Maintenance Level 1 roads would remain open for administrative access.
- About 53 miles of Maintenance Level 1 and 2 would be converted to trail; 33 miles would be converted for Class I and III vehicles and 20 miles for Class II vehicles.
- About 90 miles of user-created trails that are either located in inappropriate areas and/or are redundant would be closed and rehabilitated.
- About 118 miles of shared use roads for all vehicle classes.
- Motorized and non-motorized uses would be separated as much as possible, except in wet areas (riparian reserves/RHCA) of the two-mile stretch of the Metolius-Windigo trail, by paralleling wherever possible. Equestrians, hikers, mountain bikers, and motorized users would continue to share portions of the trail due to limited options caused by terrain, land ownership, and proper riparian function of the wet areas. Signing would be used to encourage

[2] Conversion of a road into an engineered trail uses the entire prism of the roadbed to engineer more of a trail experience by narrowing the track and creating meanders and topographic relief with an undulated surface.

[3] Shared use roads are those routes shared by licensed and non-licensed motor vehicles and they have been specifically identified and designated in the Three Trails OHV trail system.

respectful behavior by all users.
- An underpass for Highway 97 that links the Rivers and Walker segments.
- A new wildlife guzzler installed on Walker Mountain.
- A day use parking area with non-motorized trail to the Little Deschutes River.
- Railroad crossing south of 5825 road.
- A new ATV bridge that crosses the Little Deschutes River.

This alternative was not selected because it also does not provide the balance for rider's experience and big game habitat effectiveness that I am seeking. Although it was primarily developed to provide a quality rider's experience, I believe we have that in the Selected Alternative.

Alternative D

This alternative was developed in response to Key Issue #2 by providing more effective mule deer and elk summer range, calving/fawning areas, and migration corridors. It also responds to Key Issue #3 by prohibiting cross-country motor vehicle use in the Muttonchop Butte play pit and moving trails to dampen potentially related noise to adjacent residences. It also responds to Key Issue #4 by separating uses as much as possible on the Metolius-Windigo Trail. This alternative is characterized as having more tightly concentrated loops away from the big game migration routes and private property, as compared to Alternative C. It also has four strategically placed staging areas in Junction, Rivers, and Walker trail systems. Compared to Alternative B, this alternative has a total of 13 additional trail miles and has scenic vistas on Little Odell Butte and Railroad Ridge. There is foot trail access to water along the Little Deschutes River; however no new bridges will be constructed. There will be 109 miles of engineered trails and 42 miles of roads converted to trails for a total of 151 miles. In addition there are 56 miles of shared use roads for a total 207 route miles.

Alternative D Associated Actions

In order for Alternative D to be implemented, the following are associated actions:
- About three miles of currently closed Maintenance Level 1 roads would be opened and used for the OHV routes.
- About 114 miles of currently open Maintenance Level 2 roads would be closed (changed to Maintenance Level 1) to off-set creation of engineered trail. All Maintenance Level 1 roads would remain open for administrative access.
- About 43 miles of Maintenance Level 1 and 2 roads would be converted to trail; 35 miles would be converted for Class I and III vehicles and eight miles for Class II vehicles.
- About 95 miles of user-created trails that are located in inappropriate areas and/or are redundant would be closed and rehabilitated.
- About 56 miles of shared use roads for all classes of vehicles.
- Motorized and non-motorized uses would be separated as much as possible except in wet areas (riparian reserves/RHCA) of the two-mile stretch of the Metolius-Windigo trail, by paralleling wherever possible. Equestrians, hikers, mountain bikers, and motorized users would continue to share portions of the trail due to limited options caused by terrain, land ownership, and proper riparian function of the wet areas. Signing would be used to encourage respectful behavior by all users.
- An underpass for Highway 97 that links the Rivers and Walker segments.
- A new wildlife guzzler installed on Walker Mountain.
- A day use parking area with non-motorized trail to the Little Deschutes River.
- Railroad crossing south of 5825 road.

This alternative was not selected because, as in Alternatives B and C, it does not provide balance between rider's satisfaction and natural resources that I am seeking. The combination of a higher

density of trails in this alternative, the most limited Class II mileage of any of the action alternatives, and the limited Class III mileage does not provide for a high quality recreation experience. It also closes Muttonchop Pit play area. I have decided that I want to keep it open with measures to quiet the noise to adjacent residences.

Key Issues and How Alternative E Responds

In response to my Proposed Action, the public and the Forest Service identified four key issues. These issues were then used to develop alternatives to the Proposed Action. Following is a summary, but reference "Alternatives Considered in Detail" in Chapter 2 of the FEIS for more details.

Key Issue #1: ***The proposed action does not have the proper design to provide the recreational experience riders want.***

The proposed action reflected the interdisciplinary team's initial collaborative effort in trail design. In general, public meetings held around central Oregon, Eugene, and Klamath Falls indicated many riders will be satisfied with a trail experience that focused more on existing roads and user-created trails, with the destination of a local business, or residence.

The identification of approximately 100 miles of designated trail focused in three inter-connected but separate areas with staging and access to local destinations was a good start. However, many riders and organizations have since indicated they want the trail system better designed and engineered to provide more of a quality experience. This includes a trail system that offers a varying degree of difficulty plus more play areas, a quality camping experience, and additional trail access to scenery. They also requested the trail design to be more diverse for all class of vehicles, offering additional opportunities such as rock crawling for Class II jeeps and other 4-wheel drive vehicles and single track for Class III motorcycles.

Many riders have commented that a well-designed trail is not the same as traveling on an existing road. Increased "saddle time" on their machine and access to scenic vistas provides riders greater satisfaction and ensures greater compliance with the designated trail as they have less desire to leave the trail system. More loops back to the staging areas, or main trail system, where riders can experience previously unexplored terrain, rather than viewing a repetitive landscape is desired. Adding more turns and obstacles and introducing a degree of difficulty has two benefits. First, riders that have a straight line of site tend to travel at higher speed, which decreases rider's safety. Second, less displacement of soil occurs with lower speeds; therefore required maintenance of the trail tread[4] is reduced.

The following attributes and measures related to rider satisfaction are designed to display expected changes among alternatives:

- System layout (miles of trail by Class of vehicle). Many riders desire the most trail miles as possible.
- Number of play areas and scenic viewpoints, providing visual diversity.
- Whether the alternative contains a developed staging area, which not only provides information and logistical support for the ride, but increases the amenities available for overnight and daytime users.
- OHV trail densities. According to comments received regarding quality of a rider's experience, the feeling of solitude on a less dense trail system is preferred.

[4] Tread is the actual travel surface of the trail. This is where the rubber (or hoof) meets the trail. Tread is constructed and maintained to support the designed use for your trail (USDOT 2004).

How Alternative E Responds to the Rider's Recreational Experience
With two play areas, Alternative E incorporates most of the design features that the riders requested (longer loops, interconnected trail systems, access to public goods and services) as in Alternatives C and D. It also is one of the best alternatives for access to quality viewpoints (eight) as any of the other action alternatives. There are five staging areas strategically located and accessible by routes within all three segments. It also has the highest amount of single track for motorcycles at 18 miles plus 26 miles of trail engineered specifically for jeeps and other 4-wheel drives.

Key Issue #2: **The designation of a motorized trail system could potentially alter effectiveness of mule deer and elk summer range, calving/fawning areas, and migration corridors.**

Oregon Department of Fish and Wildlife's preliminary analysis of recent telemetry data suggests extensive mule deer use of the project area for fawning, use as summer range, and as a migration corridor. The Ft. Rock Management Unit[5], which includes the Rim-Paunina Project area, is the destination in the summer for mule deer.

Elk also use the project area for summer range and calving, with the greatest amount of use occurring near the western project boundary in the vicinity of Hemlock and Spruce Creeks, Little Deschutes River, and near Crescent Creek. This portion of the analysis area has a greater concentration of wet meadows and stream courses, which is currently providing forage, hiding and thermal cover, and calving areas. While small bands of elk can be found in most of the project area, the greatest use occurs in the western half.

Currently, considerable motorized and unregulated use is occurring in the area. The designation of a trail system and concentrated use in key areas has potential for increased disturbance, and a disruption in daily activity patterns for both species if not designed properly.

How Alternative E Responds to big Game Habitat
Oregon Department of Fish and Wildlife personnel and others raised a concern that designation of a motorized trail system could potentially alter effectiveness of mule deer and elk summer range, calving/fawning areas, and migration corridors (Key Issue #2). Alternative E responds to this key issue in several ways. It avoids an extensive trail system where big game migration corridors are more likely to occur, especially around the Walker Mountain area. It also reduces potential disturbance and provides security during critical times. Under Alternative E, 114 miles of roads under Deschutes National Forest jurisdiction will be closed by changing their status to Maintenance Level 1. An additional 43 miles of Forest Service roads (both Maintenance Level 1 and 2) will be converted to trails, and five miles of Maintenance Level 1 roads will be converted to Maintenance Level 2. To also address potential disturbance, motorized route densities (miles per square mile of road) are reduced in nine of the 16 subwatersheds in the planning area. Roads and motorized trail densities together also averaged across 16 subwatersheds went from 4.3 to 2.5 miles per square mile (Table 81, Comparison of Key Indicators for Big Game, FEIS). In addition to moving the Hemlock Key Elk area to a more favorable location and installation of an accommodating highway underpass, Project Design Features were adopted that maintains a cooperative road closure agreement on Walker Mountain and will route trails away from mule deer hiding cover to the greatest extent.

[5] Management units are large landscapes that are delineated because they provide the life requirements in summer and winter for a specific herd of mule deer.

Key Issue #3: **Focused motorized use adjacent to residences may be an annoyance.**

OHV enthusiasts living in Two Rivers North subdivision want direct access to the user-created trail system and Muttonchop Butte pit play area. Other residents do not want a public OHV area in their vicinity. Landowners with property directly adjacent to National Forest land have contacted the Crescent District office to report or inquire about the legality of motorized use on existing user-created motorized trails citing noise and dust as an annoyance.

Some residents and respondents to the public scoping have requested there be no designated trail system routes and play areas close to their private property boundary. They also expressed concern for "inviting" too many strangers so close to their homes. OHV owners believe it will be an unwarranted inconvenience for them to have to trailer their machines to a distant staging area. Currently, as a result of an Oregon Statue, Class I, II, and III vehicles must be muffled to produce no more than 99 decibels sound pressure.

How Alternative E Responds to Noise as an Annoyance
I had a very tough balance to find regarding Muttonchop pit as a play area and dampening the sounds adjacent homeowners might detect. Many riders use the pit because it is their primary destination, and it is very close to where some of then live. In fact, we heard in public meetings it is one of the main reasons riders moved to the area. However, unregulated access to the play area causes others who live adjacent to be bothered by the engine noise and late night rides in the pit. To close the pit will not only anger a segment of the visitors, it will involve tremendous effort to successfully enforce the closure. Therefore, we put quite a bit of effort into measures designed to dampen noise. Immediately adjacent to private residences, the minimum routes to provide connectivity to the pit were identified and all other redundant and unnecessary trails will be closed and rehabilitated. In order to well define the Muttonchop Butte Pit play area and keep use contained within the designated areas, barriers such as rail fences will protect the current vegetation and contain riders in approved areas. In addition, the Forest Service will establish and enforce a quiet time for the rock pit similar to developed campgrounds (usually 10 pm – 6 am).

Key Issue #4: **There may be incompatibility between users where the designated trail system overlaps the Metolius/Windigo Horse Trail system.**

The Metolius-Windigo trail extends from the head of the Metolius River leading south into southern Oregon. This 100+-mile National Recreation trail begins near the Metolius River headwaters west of Sisters and runs south to Windigo Pass near Crescent Lake. The trail was created around 1980 by linking sections of existing roads and trails, primarily to serve long-distance horse riders seeking an alternative to the Pacific Crest Trail. The trail is predominately single track dirt trail except where it overlaps the Three Trails OHV project area, where it predominately follows a road designed for high clearance vehicles and the railroad tracks. This two-mile stretch has also been dedicated to multiple use for years with motorized winter recreation and serving as a connector for the equestrians. The entire trail system has an overall moderate elevational change and portions are heavily used by horse riders during the spring to fall period. Within the segment that overlaps the Three Trails OHV project area, use by equestrians could be characterized as "low" compared to the rest of the trail system because equestrians typically enter north or south of the project area and do not ride the entire segment.

As part of the design of the Proposed Action in the Junction area, the motorized trail system utilizes the Highway 58 undercrossing near the businesses that serve the community of Crescent Lake Junction. It was installed in 2005 and was primarily designed to accommodate snowmobiles and snow groomers. It is currently utilized by snowmobilers, mountain bikers, equestrians, and OHV riders and

is the only undercrossing available for the businesses on the east side of the highway in the Crescent Lake Junction area.

The trail leading to and from the undercrossing using public property is very limited by sensitive resources such as seasonally wet areas, lakes and streams, the boundary of the Diamond Peak Wilderness along the Burlington-Northern railroad tracks, State Highway 60 (Crescent Lake Highway), and resort operations at Odell Lake. Consequently, approximately two miles will be shared between the Metolius Windigo Trail, and other modes of recreation that radiate from the Junction area.

Public comment and organized equestrian groups have indicated that designation of an OHV trail and shared use will bring additional motorized riders as the designated trail system becomes known; consequently the potential for conflict will be greater. Motorized and non-motorized uses that encounter horse riders on the trail have the potential to surprise and frighten animals, causing unexpected behavior that places the riders, animals, and other users at risk to injury. Although the mutual undercrossing is unavoidable, the two miles of overlapping shared use may become incompatible for all recreation uses in the future and separation will be a possible solution requiring additional environmental analysis.

How Alternative E Responds to Shared Use on the Metolius-Windigo Trail
This is a very popular route among all users. Therefore, motorized and non-motorized uses will be separated as much as possible except in sensitive wet areas and where constricted by private land and the railroad tracks within the two-mile stretch. Parallel trails will be constructed wherever possible. Equestrians, hikers, mountain bikers, and motorized users will continue to share portions of the trail due to limited options caused by terrain, land ownership, and to maintain proper riparian function and water quality. Education and signing to encourage respectful behavior by all users is key and part of the education and monitoring startegy incorporated into Alternative E.

How Alternative E meets the underlying Purpose and Need for Action
There is a need to provide for a designated trail system where there is some community support on the Crescent Ranger District in a suitable and sustainable location[6] *while considering other forest uses* (FEIS, page 23).

Alternative E will offer 142 miles of trail engineered for OHVs plus 80 miles of connecting high clearance roads for a total of 222 route miles. This includes 21 miles of trails engineered for Jeeps and other 4-wheel drive vehicles. After numerous public meetings and listening to feedback from stakeholders, I am selecting the alternative that provides the best balance and offers the scenery, challenge, and "saddle time" riders seek, while caring for the resources and providing for other non-motorized pursuits. Alternative E total open road density on Forest Service managed roads drops from 3.8 to 2.0 miles per square mile averaged over 16 subwatersheds.

There are many good reasons to be proactive and establish a motorized trail system in a suitable and sustainable location. However, it is also important to provide riding opportunities on the forest given the eventual implementation of the Travel Management Rule and the changes to motorized access. Alternative E also considers other important uses of the area by further separating motorized and non-motorized pursuits, protecting matsutake production, retaining access to water for anglers, and providing for big game movement and other life cycle requirements.

[6] Sustainable locations are those in the least sensitive areas with larger tolerance to motorized use over time, such as upland/drier sites with the least resources that have a relatively low threshold to habitat modification.

Reviewing Alternative E and its Likely Effects
In making this decision, I carefully considered the environmental and social consequences and the potential cumulative effects associated with this project in the short- and long-term. I also used the estimated amount of current and projected trends of riders as a factor in my evaluation of the following resource areas.

Recreation (FEIS, page 14)
I have already discussed how the design of this project and Alternative E addresses rider's experiences related to the changes in motorized access as a result of the likely implementation of the Travel Management Rule as a reasonably foreseeable action.

Earlier in this document, I mentioned how nearly all forest visitors use vehicles to get to their preferred activities and settings on National Forest locations; and for many people, their vehicle is just the mode of transportation and for others, the vehicle use itself is the activity. On the Crescent Ranger District, there have been no documented conflicts between motorized and non-motorized users. However, several respondents expressed concern that the noise associated with motorized recreation is incompatible with quiet time such as, sitting on the back porch of a residence, hiking on a favorite trail, or other recreation pursuits.

I directed the Interdisciplinary Team to perform an on-the-ground analysis of how this project may effect solitude which is key to quiet experiences. In conclusion, it was determined that our situation with the Three Trails OHV analysis area and findings matched up well with the science (Sengpiel audio 2009). Most people who are likely to be annoyed by the sounds of OHVs will not likely notice OHV riders in distances over 0.89 miles. OHVs are not the only audible sounds near private residences as there are mixed use roads that produce associated noise that will continue regardless of this decision. In addition, those that desire a more quiet recreation experience are more likely to find solitude as most of the non-motorized trails and now, designated motorized trails, are well separated (FEIS, Figure 19, page 117).

I have already discussed the measures we incorporated to quiet the noise that potentially eminates from the Muttonchop Pit play area and trails adjacent to residences. Regarding audible sounds that potentially can be heard in the nearby Wilderness and OCRA, it was determined the opportunity to hear and see motorized vehicles in Alternative E will not appreciably change from the current condition. The nearest designated OHV trail to the OCRA is one mile and therefore visitors within the OCRA are not likely to experience sounds from an engine. Two trails (Fawn and Pretty Lake) are within the Diamond Peak Wilderness and are near the boundary of the Three Trails OHV project area. They are managed exclusively for non-motorized use, and their proximity is close to current OHV trails. Parts of these two trails are within hearing range (0.89 miles) of current OHV use on the two-mile portion of the Metolius-Windigo Trail west of Junction Sno-Park, which is a high clearance road that equestrians, mountain bikers, snowmobiles, and OHVs currently use. Approximately the same portions of these two Wilderness trails are also within audible range of the Union Pacific railroad tracks which traverses the edge of the Wilderness boundary. In addition to several freight trains a day, lack of proximity to a wilderness trailhead and the existing relatively low use in the wilderness, visitors and the values associated with unroaded characteristics will not appreciably change from the existing condition. The area of overlap of potential noise into the 52,337-acre Wilderness area is approximately three percent (FEIS, page 116). Visitor's current feelings of remoteness and solitude will remain.

I also directed the team to perform an analysis showing motorized versus non-motorized trails on the district. They are well separated. Because of the designation where motorized uses can occur, non-motorized opportunities will be improved with elimination of cross-country travel within the project

area. Designation of a motorized trail system will minimize conflict with other non-motorized users. This will enable visitors to choose a recreation setting away from sights and sounds from riders and have a greater assurance they will have the experience they desire. Also, due to the miles of separation between motorized trails and Inventoried Roadless Areas, it was determined there will be "no effect" on a range of unroaded values (FEIS, Page 114). No motorized trails have been designated in any IRA.

The greatest potential for conflict in the project area is associated with the shared use on the two-mile portion of the Metolius-Windigo trail where all users share the connection and underpass on Highway 58 to access local businesses. Through separation, monitoring, and education strategies for the Metolius-Windigo portion as discussed under the Key Issues, I believe the overall frequency of user conflicts between non-motorized and motorized recreation users across the entire project area will remain very low, or decrease, in both short- and long-terms.

Regarding Wild and Scenic River values associated with the Little Deschutes River and Crescent Creek and the corridors within for which the Three Trails OHV project designates a few routes, it was determined the Outstandingly Remarkable Values (ORVs) were protected for both rivers. The analysis also showed the effects on a variety of resources was more than offset by the miles of closures of roads and user-created trails that will be rehabilitated. There is a net reduction to roads and trails within the corridors and a corresponding benefit to the values (FEIS, Table 37). Alternative E was determined to be consistent with the amended Forest Plan for the management of the Little Deschutes River, the Standards and Guidelines for Wild and Scenic Rivers (MA-17) and the proposed Standard and Guidelines for the Crescent Creek Wild and Scenic Management Plan.

Concerning the local and regional opportunities for motorized users, it is reasonable to assume OHV opportunities are being reduced cumulatively by travel management decisions on National Forests and other public and private lands throughout the Pacific Northwest. It is known that these reductions in opportunities will displace some users from currently accessed areas, roads, and trails. What is not known, is whether the overall amount of OHV use locally, regionally, or nationally will be reduced as a result of the reduced opportunities or if current use will just be concentrated into the smaller areas where OHV opportunities continue or are developed in the future.

Soil Quality (FEIS, page 127)
It was determined that activities associated with route designation (including new trail construction) and staging areas will have an overall beneficial effect to the soil resource by placing the designated trails system in more ecologically suitable locations, allowing natural and management-induced processes to lower the overall footprint of detrimental soil conditions within the project area and reducing the overall soil disturbance associated with user-created trail systems.

Wildlife and their Habitat (FEIS, page 149)
There is an extensive and robust analysis for over 60 species in Chapter 3. Effects vary by species and habitat; however a generalization for most species is that roads and trails have the potential to alter habitat or species use of that habitat. Therefore, it is imperative to put trails in the right place and eliminate those that are causing detrimental disturbance. The analysis used the most relevant science and models to determine effects associated from a 200 meter distance buffering roads. Basically, it boiled down to disturbed versus undisturbed habitat. In general, the conclusion for most species was that the overall reduction of existing roads and trails, elimination of cross-country travel, and rehabilitation of riparian-related problems on existing routes resulted in an increase in the amount of undisturbed habitat. For some species, the overall effect was a benefit; for others, it was found that activities associated with road closures and rehabilitation of user-created trails more than offset the effects of designated routes.

Danger tree removal is irrelevant as it relates to wildlife habitat for this project. They will only be removed where they are leaning across the trail and at areas of concentrated use, such as at staging areas. This is estimated to be less than five to ten snags removed per year in the project area, based on maintenance conducted for OHV trails on the Bend/Ft. Rock Ranger District of the Deschutes National Forest. The loss will be so small that it is immeasurable on the scale of available habitat inside and outside the project area.

Actions designed in Alternatives E will have a net benefit to deer habitat. The analysis conducted with the mitigation measures and Project Design Features listed in Chapter 2 show that the net effect of the project on deer habitat is consistent with Forest Plan wildlife objectives for several reasons:

- The overall density of roads and trails in the project area will decrease.
- A Project Design Feature will route trails away from mule deer hiding cover to the greatest extent possible during the layout and implementation phase.
- An underpass for Highway 97 will be designed to accommodate big game and smaller wildlife species. This should result in less wildlife highway mortality while attempting to cross Highway 97.
- There will be less motorized use permitted within the riparian zones (see Aquatic Resources in Chapter 3) allowing mule deer greater access to water resources, forage, hiding cover, and use as fawning and calving habitat.
- The designated trail system that minimizes trail use east of Highway 97 to Little Walker Mountain. This strategy with proposed road closures east of Highway 97 reduces motorized disturbance to mule deer during spring and fall migrations in habitats known to experience high use.
- The Walker Green Dot Road Closure Order will remain in effect during the mule deer modern rifle season.
- There will be no cross-country travel in the project area.

Overall, Alternative E will benefit elk based on road closures, trail design, and the amount of undisturbed habitats greater than one-half mile from an open road or trail. In addition, the adjustment of the Hemlock Key Elk Area will improve the overall habitat effectiveness.

Regarding a presidential order (Executive Order 13443) related to hunting opportunities, there will be no change in availability to those currently within the project area. However, there will be a change in the way hunters use the area. There will be an overall reduction of motorized access with a mix of road closures, roads converted to motorized trails, closure/rehabilitation of some user-created trails, and construction of new trails to provide a designated OHV trail system. Hunters with trucks and four-wheel drive vehicles will experience less access as a result of the road closures although the OHV users will be able to access big game habitats with their OHVs on designated trails. Conversely, those hunters seeking a hunting experience with less motorized use may find additional suitable areas in the Three Trails OHV project area.

Management Indicator Species (FEIS, page 212)

I am aware of the recent court cases regarding Management Indicator Species (MIS) and I have reviewed the effects for those individual species. MIS were identified and selected under the Deschutes National Forest Land and Resource Management Plan because their populations are believed to be most influenced by forest management. This project does not appreciably affect the vegetative condition. I also reviewed the analysis of the disturbance effects associated with the designation of a trail system. It used the "best available science" approach for reliable and accurate information on defining the quality and quantity of habitat starting on page 212 of the FEIS.

Alternative E provides clear benefits to these species by improving the percentage of undisturbed habitat within the project area. Improvements to habitat for these species will be expanded beyond the project boundary when the Travel Management Rule is implemented. Therefore, given the effects demonstrated starting on page 216 of the FEIS, the project does not contribute to an overall downward trend of species viability at the Forest level; and in fact, likely will lead to long-term improvements. The effects analysis concluded for each individual species there are two situations regarding viability at the forest level. For species such as the woodpecker guild, the project would not contribute to a change. For species such as diurnal raptors, the project would result in a positive contribution. For all MIS within the project area, there would be a net improvement to habitat due to road closures, rehabilitation of user-created trails, elimination of cross-country travel, and directing motorized use to the places most suitable.

Old Growth Management Area MA-15 (FEIS, page 298 and Figure 1)
In summary, Alternative E within Old Growth Management Areas:

- Closes more roads (24.3 miles) than it designates existing roads for shared use or convert roads to trail (2.9 miles);
- Closes and rehabilitates 5.5 miles of existing user-created trail;
- Does not construct any new road or trail; and it
- Moves Muttonchop Butte Old Growth Management Area to a more suitable location regardless of designation of a motorized route.

Our Designated Old Growth Management Areas within the project area have roads and motor vehicles use; those roads are used extensively, in some areas. This is especially true in the Walker Rim segment. Although Alternative E uses some of these roads as routes for OHV trail systems, the amount of increased traffic compared to the use that exists is minor, even with an increase of 2.5 to 5.6 percent within the next decade. This equates to an increase of up to 11 riders per day over the next decade, or from 200 riders to 211 riders on prime summer weekends. Under Intensive Recreation in the Forest Plan (Intensive Recreation), it defines concentrated use "...will occur around developments (page 4-135)." There is no such use in these Designated Old Growth areas. There will be no trails, staging areas, or any other facilities constructed. Further, for most species, the wildlife analysis classifies an open road as a disturbing agent regardless of levels of use.

Overall, the Three Trails OHV Project reduces the density of roads in Old Growth Management Allocations. All action alternatives do not have any staging areas, campgrounds, or trailheads considered concentrated use (Forest Plan, Intensive Recreation, page 4-135 "....Generally, high concentrations of visitors will occur around developments". Use of a designated trail system, regardless of motorized or non-motored use is considered dispersed (Forest Plan, page 4-4, "...Activities which disperse recreation throughout the forest include nordic skiing, river rafting, mountain bicycling, and off-highway vehicle use)." Therefore, all action alternatives are consistent with M15-1 and M15-3 which allow dispersed use of OHVs and prohibit concentrated use associated with developments such as staging areas and campgrounds.

Some of our stakeholders believe the only habitat provided for focal species is limited to the Old Growth areas. This is not true. According to the wildlife analysis and mapping of focal species habitat, late and old structured habitat is provided throughout the project area. In some cases, as for the pine marten, there are much larger blocks of undisturbed habitat available outside the designated Old Growth Management areas. Because of the overall reduction of open roads that are allowed to revegetate naturally, it is consistent with the Standard and Guideline that calls for the minimum standard and density needed to meet the objectives of the management area (M15-14).

The Three Trails OHV Project is consistent with the goals of MA-15 Old Growth Management Area because it provides naturally evolved old growth forest ecosystems for:

(1) *Habitat for plant and animal species associated with old growth forest ecosystems*:
The Three Trails OHV project does not alter OGMA from providing late and old structure stands for habitat of focal species, or limit diversity of species dependent on late and old structure. All routes are on existing Maintenance Level 1 and 2 roads. No other vegetation will be removed; therefore habitat for plant species associated with old growth systems will not change. No new trails or developments are to be constructed within the Old Growth Management Area.

(2) *Representations of landscape ecology*
There will be no change to the current representations of landscape ecology.

(3) *Public enjoyment of large, old tree environments*
There will be no vegetative changes or effect to large trees associated with the action alternatives.

(4) The needs of the public from an aesthetic spiritual sense
Visitors to an Old Growth Management area to seek an aesthetic and spiritual experience usually gain access by a road and use a motor vehicle in one form or another. This access can also potentially affect aesthetic and spiritual values. Although the Three Trails OHV project designates dispersed access in the form of roads and trails (motorized routes) on 2.9 miles within Designated Old Growth Areas, it offsets the potential effect by closing 24.3 miles of currently open roads. Public enjoyment to these areas is maintained through a lower level of motorized access.

In the Davis Late-Successional Reserve, there are relatively few routes being designated and it is consistent with the Davis Late-Successional Reserve Assessment recommendations. The main reason for route creation is to gain access to a pit (Black Rock) where OHVs can access a play area that is highly altered from mineral extraction. There are no new facilities and no staging areas or campgrounds designated for use within the Late-Successional Reserve. The proposed OHV trails will use existing roads, utility maintenance roads, horse trails, and/or snowmobile trails. Viewpoints are existing open areas on roads. There is no enhancement of these viewpoints proposed.
Overall, Alternative E reduces open roads - moving two of the three Management Strategy Areas (MSAs) toward the target open road density.

Fisheries and Aquatic Resources (FEIS, page 323)
The Three Trails OHV project area can best be summarized as relatively flat with well-drained deep pumice soils that allow precipitation to be absorbed into the ground and transported down slope as subsurface flow. Water generally does not surface until reaching a valley bottom. There are no new stream crossings, and the ones that exist are engineered to Forest Service Best Management Practice standards.

In summary, there are potential beneficial effects to fisheries from implementation of Alternative E. It moves use away from water and coupled with restoration activities, it considerably decreases the potential for sediment delivery. This project closes and rehabilitates up to 17 miles of roads and trails within riparian areas with a corresponding reduction in the open roads/trail system. This effectively increases overall vegetative recovery, which contributes to improved bank stability and provides a very small increase in potential vegetative cover to intercept solar radiation (shade). It was determined that there will be **"No Effect"** to Columbia River bull trout and **"No Impact"** to interior redband trout.

Route creation in or near wet areas was avoided where possible; however in a few cases, it is unavoidable. For example, the Metolius-Windigo horse trail utilizes Forest Service Road 5800-620 and will continue to provide shared use among motorized and non-motorized users. This section of the trail contains the only crossing of Highway 58 near Crescent Lake Junction, via underpass, to access the businesses on the east side of the highway. Trail access to the undercrossing using public

property is limited by sensitive resources such as seasonally wet areas, lakes and streams, the boundary of the Diamond Peak Wilderness along the railroad tracks, State Highway 60 (Crescent Lake Highway), and resort operations at Odell Lake. This route has been engineered with Best Management Practices for water quality (culverts and drainage systems appropriate for the location). Alternative E will share common tread in or near wet areas and riparian-associated vegetation. Outside those areas and during every opportunity available, users will be on a parallel trail up to 400 feet separation where possible. Approximately one-half mile of the two-mile trail is within the Riparian Habitat Conservation Area buffer of 100 feet outside of Cold Creek and within 300 feet of the creek itself.

Because use is confined to an existing road prism through wet areas and will not have new crossings of any areas associated with wet conditions or riparian-associated vegetation, and because the topography is flat, has well drained soils, and no connectivity to standing water, activities associated with the Metolius-Windigo trail will have no measureable effect on water quality in the Cold Creek drainage. Based on these resource considerations, there will be no short or long-term effect to resident fish.

The 10-mile trail in the Rivers segment is another segment of trail construction that will be one of the few remaining within a Riparian Habitat Conservation Area. It consists of ephemeral draws that are not associated with a body of water. This alternative will include an alignment that follows an existing user-created trail (10 Mile), which crosses four ephemeral draws that are truncated at a railroad grade downstream. There is no surface connection to perennial streams or fish bearing water. It has been determined that construction of these crossings will have no quantifiable effect to water quality or resident fish or their habitat because these draws are ephemeral and terminate within 1,000 feet at a railroad prism. By using a set of Project Design Features that will protect the tread and discourage puddling of water, my concern for any potential degradation of water quality is alleviated.

In general, the effects of fugitive dust are localized and confined largely to the immediate vicinity of the motorized route. The extent to which fugitive dust occurs is variably documented in literature, and in the case of dust generation, varies by vehicle class, speed, and soil type (Goossens 2009).

Aquatic Conservation Strategy (FEIS, page 352)
This project has been determined to be consistent with the Deschutes Land and Resource Management Plan, as amended, by the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD, B-9) by meeting the nine objectives, as well as Key Watershed Standards and Guidelines found in the ROD, C-7. I have determined that Alternative E is consistent with the Aquatic Conservation Strategy for the following reasons:

I have reviewed the 1997 Big Marsh and 1999 Odell Watershed Analysis as well as the 2007 Davis Late-Successional Reserve Assessment. This information has informed me about the ecological functions within the Key Watersheds.

I have reviewed the Aquatic Conservation Strategy Objectives (FEIS, Fisheries and Aquatic Resources, Chapter 3), particularly the analysis found in the soil and water quality sections. I have determined that the actions in Alternative E maintain and/or restore every aspect of the nine objectives. It does not prevent attainment of any objective. The following rationale supports my conclusions:

Alternative actions include rehabilitation of user-created trails, especially those in the riparian areas that are not used for the designated trail system. Also, there is an overall reduction in road densities in

the reserve. Prohibition of travel off of designated routes will allow for passive recovery of a vegetated condition that will begin immediately and it will reverse a trend of potential future degradation created by access and motorized traffic. Total open road density on National Forest System Roads drops from 3.8 to 2.0 miles per square mile averaged over 16 subwatersheds (FEIS, Table 82). Use will be directed to occur in more appropriate and sustainable areas where potential effects can be confined, monitored, and or remedied if an undesirable circumstance occurs.

Botany (FEIS, page 355)
There are no known occurrences of federally-listed Threatened or Endangered plants in the project area. Of those sensitive plant species that occur under the Bonneville Powerline and in adjacent wetlands where we are designating routes, I have incorporated measures to direct use away from the known populations and encourage riders to stay on the trail. In every one of these areas, riders currently using the existing roads and trails are staying confined to the existing surface. To ensure protection, structures such as fencing will utilized. I have seen these measures work in other areas on the forest, particularly in the Hog Rock Crawl area.

Alternative E was found to pose a moderate risk for the introduction and spread of weeds. As the Crescent District has a relatively few weed infestations as compared to other Districts within the Forest, local riders pose only a minor risk of introducing or spreading weed material within the project area. However, that risk will increase as riders from more weed-infested areas come to the Crescent District to ride the designated trail system. By having a designated trail system that is regularly monitored, weed infestations have a better chance to be acted upon, rather than the current unregulated system where cross-country travel is allowed. If new weed populations are found, the best control methods would be analyzed under NEPA and most of the time, handpulling is an effective tool with very few environmental consequences. Bottom line is the District has a good handle on controlling weed populations; therefore implementation of this project will make this task incrementally easier.

Cultural Resources (FEIS, page 382)
This decision allows me to better direct where motorized travel will occur plus it facilitates the Forest Service to have a more manageable monitoring program for sensitive sites. Under a passive management scenario, there is a greater potential for information and/or site integrity to be lost from unregulated motorized travel.

Following guidelines in a 2003 Regional Programmatic Agreement (PA) among USDA-Forest Service, the Advisory Council on Historic Preservation, and the Oregon State Historic Preservation Office (SHPO), a finding of "*No Adverse Effect*" (No Historic Properties Affected) was determined under Stipulation III (B)5 of the Programmatic Agreement. The Forest finds that there are historic properties but the undertaking will have no adverse effect on them as defined by 36 CFR 800.16(i). Any potential information that will otherwise be lost will be documented and reported to the SHPO.

This finding is based on Resource Protection Measures that have been incorporated to determine the eligibility of unevaluated sites prior to trail construction. This will be accomplished through a series of treatment, data collection, and trail rehabilitation measures to document potential character defining features of the site. For those sites that may be eligible and are already being traversed from user-created trails through or adjacent to the site, Mitigation Measures will include site protection of the remaining portion adjacent to the route, data recovery, and/or avoidance. Protection is not required for those sites that are evaluated and found not eligible.

I have committed to a monitoring program, including for discovery and protection of cultural resources. Monitoring of all sites will occur during and after trail construction and route designation for a period of 10 years. Following implementation, site visits will occur at least twice per open

season. Additional visits may be warranted based on initial findings. The first annual visit will be within one month of the beginning of the "riding season" and the second within a month of the end of the season. This will provide comparative data over the course of the season to gauge changes at the monitoring locations.

Therefore, these actions are consistent with the Preservation of American Antiquities Act of June 1906 and The National Historic Preservation Act of 1966 as amended.

Transportation System (FEIS, page 386)
I have determined the roads within the project area are the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest Lands. We are consistent with the Travel Management Rule 212 subpart A. We also demonstrate consistency with CFR 212 subpart B (FEIS, page 451) and identify and maintain an appropriately sized and environmentally sustainable road system that is responsive to ecological, economic, and social concerns. This document is the roads analysis for the Three Trails OHV project area. It was considered on a route by route basis. Through an interdisciplinary process and numerous public forums with interested and affected citizens, a minimum system was identified that meets applicable statutory and regulatory requirements, as well as reflecting long-term funding expectations.

For public safety, a mixed use analysis for sharing all potential motorized traffic has been performed to establish the suitability of allowing mixed use on roads in the context of their current setting in terms of alignment, width, typical user speed, and presence or absence of traffic control devices. In particular, this supplemental engineering analysis would be performed on portions of Roads 5825, 5830, and 6020 to determine what requirements would be necessary. A Project Design Feature for public safety would sign for the presence of OHVs on all shared routes in the Three Trails OHV Project area.

Climate Change (FEIS, Page 405)
I received several comments that this project will affect global climate change. First, there are very limited circumstances when vegetation will be removed for a segment of new trail. It was determined that those activities will not be analyzed as a potential effect. Areas of user-created trails to be rehabilitated and returned to a vegetative state will offset any actions that remove it.

Second, is the emission of greenhouse gases (GHG). The Forest Service anticipates up to 400 riders during peak times in the project area (Recreation, Chapter 3), plus approximately 200 vehicles to transport them. This equates to 600 motor vehicles emitting GHG. This represents a very small fraction of the total internal combustion engines globally emitting GHG, even with the anticipated 2.5 to 5.6 percent (15-34 engines) increase in riders annually over the next decade. Therefore, this incremental contribution to global climate change is negligible.

Agency direction states: "[b]ecause greenhouse gases mix readily into the global pool of greenhouse gases, it is not currently possible to ascertain the indirect effects of emissions from single or multiple sources (projects). Also, because the large majority of Forest Service projects are extremely small in the global atmospheric carbon dioxide context, it is not presently possible to conduct quantitative analysis of actual climate change effects based on individual projects (USDA 2009)." The Environmental Protection Agency is now implementing emissions standard requirements for two stroke (among other types) of engines (40CFR 1051). As new engines are designed to meet these criteria, older and less clean OHVs will be phased out, likely to offset the contribution from the predicted increases in riders.

Fire and Fuels Management (FEIS, page 407)
I do not expect designation of a motorized trail system to appreciably change the risk from a landscape perspective. On the Crescent Ranger District, there has been only one fire that has been attributed to OHV use. Overall, with the planned location of routes and designation of staging areas, risk is reduced because fire prevention efforts can be targeted to specific areas along with a comprehensive education program. Campfires in staging areas will be limited to approved fire pits, or not at all. Monitoring and education programs such as checking spark arrestors and updating visitors on summertime hazards can be accomplished in a few, targeted locations.

Scenery (FEIS, page 414)
There will be very little change to scenery as all designated routes that intersect important scenic corridors such as Highways 58, 97, and County Road 61 are *perpendicular*. The FEIS was corrected to reflect this information. Between relatively narrow trail widths (50 inches for Class I and III vehicles) and motorists traveling at highway speeds, the trail system is subordinate to the landscape. All parallel routes are not visible from the corridor and the main focus for the traveling public will be on the vegetation and vegetative condition which would not be affected by the alternatives.

Safety and Public Health (FEIS, page 424)
Safety of the riders is a main consideration when designing, engineering, and maintaining a trail system. Considerations for trail use and design are based on modes of travel, amount of use, rider experience, mixture of uses, geography, topology, soils, and weather conditions. We will achieve this by using signs in the right place, education with proper enforcement, placing attention to trail maintenance, and designing the new trail system for the right modes of travel and proper speed.

Also, with the presence of agency personal, riders will be properly notified of hazards from trail maintenance activities to overlapping administrative actions such as active timber sales and prescribed burning. Riders will be well informed with vegetation management activities through personal contact, signing, and the central Oregon website. If I have to close a portion the trail system to provide for safety, it will be well coordinated among the riders and the appropriate personnel.

Social and Economics (FEIS, page 427)
The Three Trails OHV Project will shift the philosophy that many users on National Forest lands have long been accustomed to. Lands that have always been open unless designated closed are soon to be changing their status. No longer will they have unrestricted cross-country travel but will be limited to riding within designated off-highway vehicle areas or on designated trails. Some expressed that this is more of the government taking away their rights, while others expressed that this is the government finally stepping up and protecting the natural resources they are responsible for managing for future generations. These are the main reasons to construct and maintain a designated motorized trail system on the Crescent Ranger District. Many riders are very passionate about their recreation experience. We need to provide this opportunity for those who are losing the ability for cross-country travel.

The communities of Gilchrist, Crescent, and Crescent Lake have historically relied upon logging as the primary economic driver. Linkage to the community at Crescent Lake Junction should help diversify the clientele that patronize their businesses.

Consideration of Public Comment

In making this decision I thoroughly considered the comments received during the 45-day comment period. Appendix C of the Final EIS details the consideration and response to public comments. Conflicting opinions and points of view about the best use of National Forest System lands are not unique to this project, and my reasoning here will not resolve these issues for everyone. I recognize

that some groups that reviewed the project were fervently opposed to OHV use on National Forest lands while others ride OHVs as their primary recreational activity. This decision does the best job of providing recreation opportunities and desired experiences for both motorized and non-motorized users.

Some members of the public believe the Three Trails OHV project and the central Oregon Travel Management Project are connected actions. They are not. Implementation of the Travel Management Rule does not hinge on implementation of this project, Lava Rock OHV Trail System proposal, or any other proposed or existing OHV trail system in central Oregon. There is no reasonably close causal nexus, or relationship between the decision to develop area-specific OHV trail proposals and implementation of the National Rule. While there are similarities to the existing East Fort Rock OHV trail system, the Three Trails OHV project, the Lava Rock OHV Trail System proposal, and any other OHV trail proposals on USFS lands in Oregon, each of these proposals are independent and can be implemented without implementing the others. As such, the Three Trails OHV Project is not a "connected action" under the NEPA (40 CFR 1508.25), and is not required to combine analysis with any other OHV proposals on Federal Lands. Currently, there are no designated motorized trail systems on the Crescent Ranger District.

Some commenters questioned our cumulative effects analysis and believe past, present, and reasonably foreseeable trail systems in central Oregon will affect our trail system and resources. The analysis discloses where there is a potential effect (FEIS, page 125). However, the Three Trails OHV project will be considered a destination OHV area (as well as others) and it is highly unlikely an appreciable amount of visitors will venture from one destination to another for a day excursion. Sources used to estimate visitation over time, such as law enforcement officers, riders, and resort owners, confirmed assumptions used to determine the number of riders now, and in the future.

Several respondents were concerned about the ability to enforce the new trail system, as well as to maintain the trail system in a manner that facilitates compliance. While riders become familiar with the trail system, education will be key in achieving compliance. Part of the education program will include the riders from several organized groups that have indicated a desire to volunteer and help monitor the new trail system for compliance. In addition to our own personnel on the ground, the central Oregon website (http://www.fs.fed.us/r6/centraloregon/travel-mgmt/index_trailmaps.shtml), and information provided at the staging areas, these volunteers will provide a valuable service to augment our own programs. This decision includes a very detailed education, enforcement, safety, and operational plan (FEIS, page 417), that includes a sense of commitment and ownership by the riders. This integrated model has served central Oregon well and has proven successful on all destination motorized trail systems within the Central Oregon Combined off Highway Vehicle Operations (COHVOPS) area. Where enforcement has been difficult in the past because of cross-country travel and complicated and inconsistent rules, now users have uniform and consistent direction where they can and cannot ride. Simply being in the wrong place is cause for law enforcement action.

Several Class II advocates were disappointed in the lack of trails in the Three Trails OHV project specifically engineered for them. I have included as much as possible at Black Rock and Walker Mountain, given the environmental parameters. Preferred Class II terrain is very limited on the Three Trails OHV Project area due to the relatively flat topography mostly absent of geographic obstacles. At Black Rock, even if some could drive onto the rugged lava flow, it is valued for its unroaded nature and it provides habitat for a variety of species, including bats. On Walker Mountain, I am balancing riders experience with fragile soils, Native American spiritual sites, Old Growth Management Area allocation, and prime big game habitat.

Changes between Draft and Final EIS

Very few changes were made between the Three Trails OHV Project Draft and Final EIS, besides minor grammatical corrections, editorial formatting, and clarification of data previously presented. The changes were driven by public comment and a comprehensive internal review.

- Big Marsh and Odell Tier 1 Key Watershed consistencies
- Clarification and summary of effects were added in the Old Growth section.
- A new figure was added to show more clearly the intersect between existing roads, user-created trails and the Wild and Scenic River corridors in the Three Trails OHV project area.
- Crescent Creek was added as a 303(d) listed stream in the project area.
- A response to EPA comments on a 'right sized' OHV system.

Legal Requirements and Policy

In reviewing the EIS and actions involved in Alternative E, I have concluded that my decision is consistent with the following laws and requirements that have not previously been discussed in this document.

The National Environmental Policy Act (NEPA)

NEPA establishes the format and content requirements of environmental analysis and documentation. The entire process of preparing this environmental impact statement was undertaken to comply with NEPA.

The National Forest Management Act (NFMA)

I have reviewed the analysis and find this decision to be consistent with the Deschutes Forest Plan, as amended, and with the requirements of the National Forest Management Act implementing regulations. Nearly every resource discussed in the EIS has a finding of consistency with the Forest Plan.

This decision includes amendments to the Deschutes National Forest Land and Resource Management Plan to allow a designated motorized trail in the Intensive Recreation Management Area, move the Muttonchop Old Growth Management Area, and adjust the boundary of the Hemlock Key Elk area. This includes a change of the Northwest Forest Plan allocations where a net change of 361 acres of Matrix lands would revert to Administratively Withdrawn associated with the movement of the Old Growth Management area. I have determined these amendments to be insignificant based upon the analysis for determination of significance starting on page 441 of the FEIS. My rationale is presented on the beginning of this document. These changes are very small in contrast to 1.6 million acres of the Deschutes National Forest and they will not alter the long-term relationship between levels of goods and services projected by the Land and Resource Management Plan. They do not set precedence and only apply to this project.

These amendments were prepared under the 2000 rule as amended with transition wording at 36 CFR 219.35 that allow the use of the 1982 rule procedures. [See 65 FR 67568, Nov. 9, 2000, as amended at 66 FR 1865, Jan. 10, 2001; 66 FR 27554, May 17, 2001; 67 FR 35434, May 20, 2002; 68 FR 53297, Sept. 10, 2003; 69 FR 58057, Sept. 29, 2004]. The 1982 rule and the 2000 rule as amended is available online at http://www.fs.fed.us/emc/nfma/2000_planning_rule.html

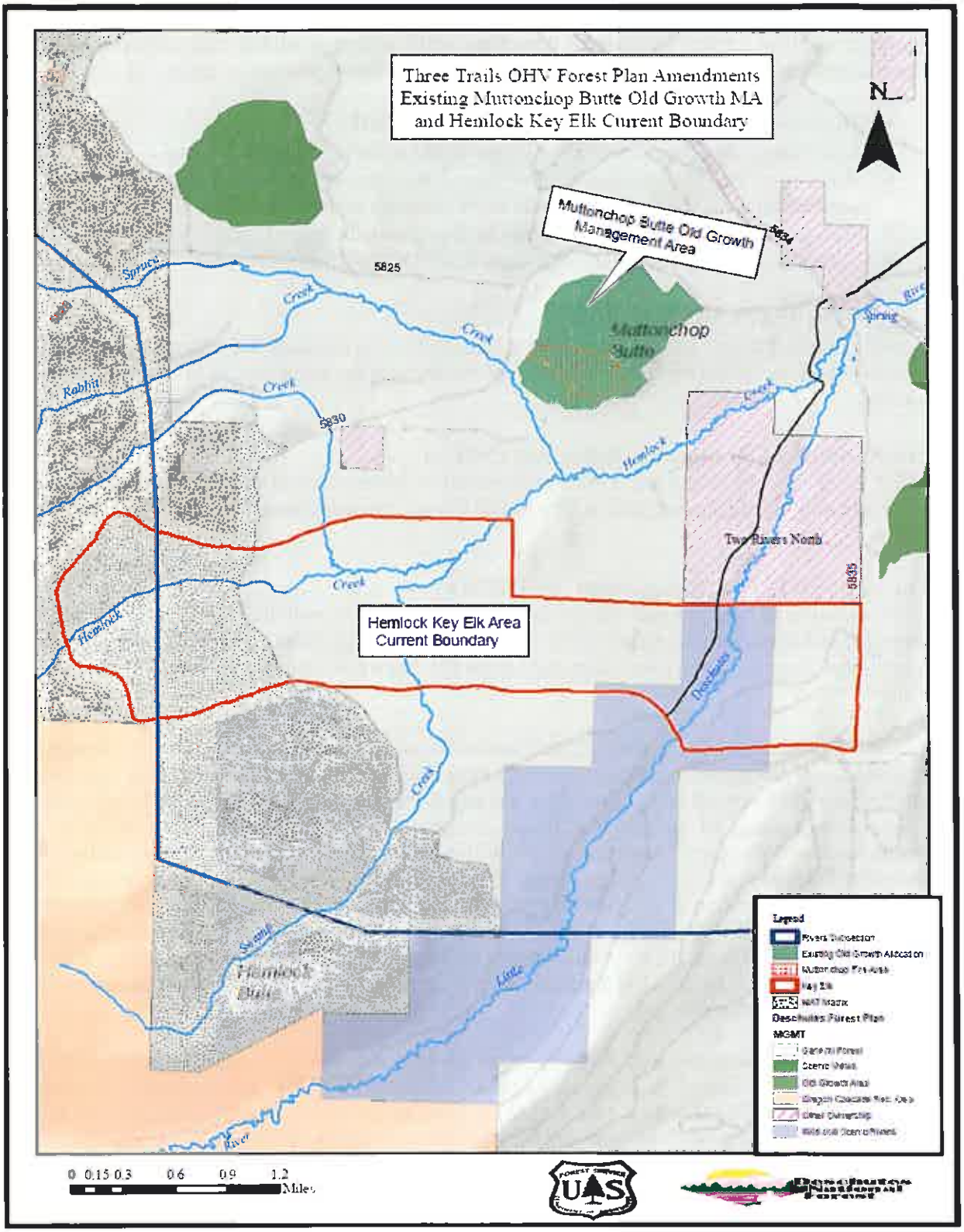

Figure 6. Existing Condition Muttonchop Old Growth MA and Hemlock Key Elk Area

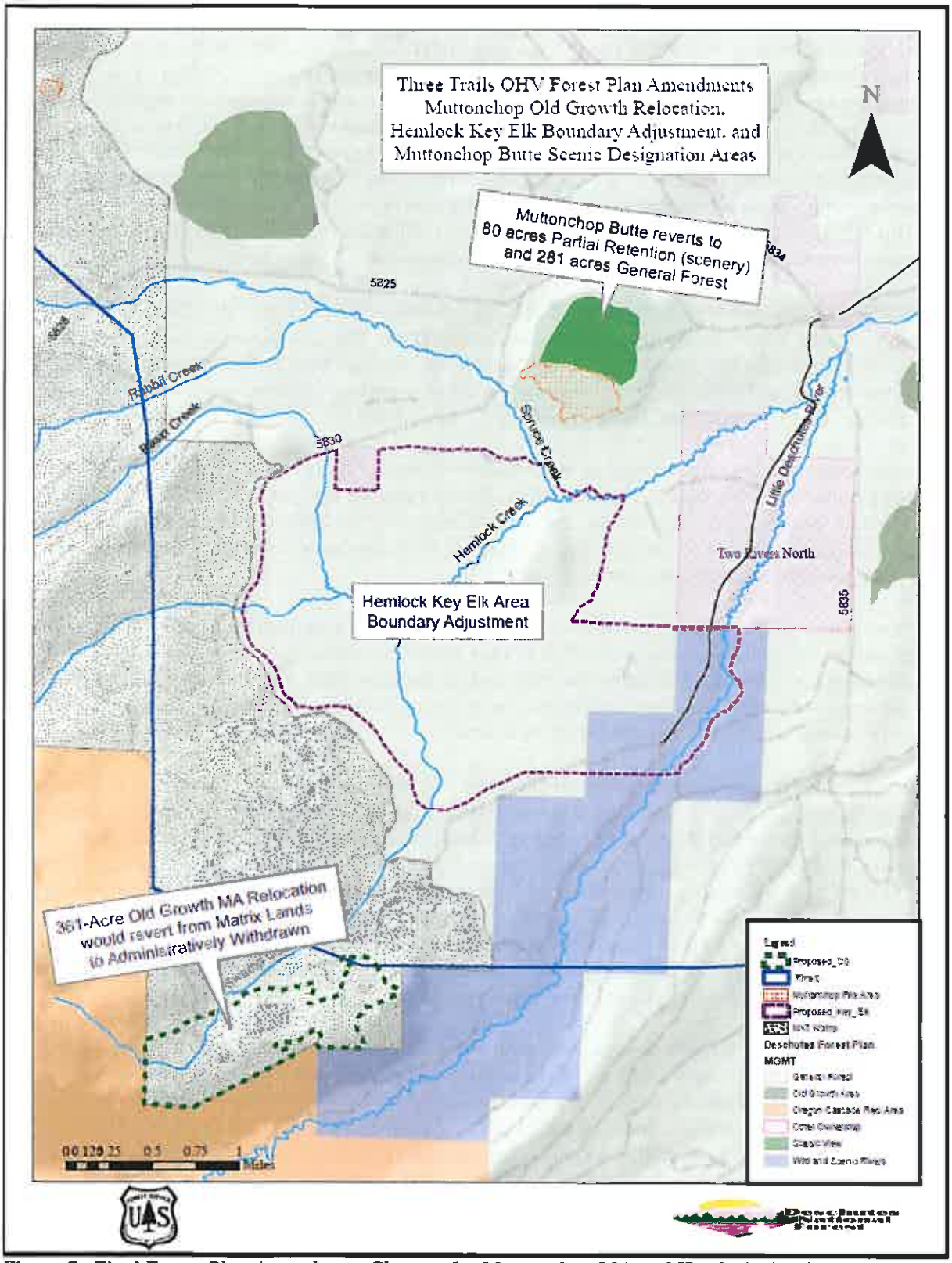

Figure 7. Final Forest Plan Amendment Changes for Muttonchop MA and Hemlock Key Elk Area

The Clean Water Act, 1982 and 303(d)

The selected alternative will comply with the Clean Water Act. It meets anti-degradation standards through planning, application, and monitoring of Best Management Practices (BMPs). The Environmental Protection Agency has certified the Oregon Forest Practices Act and regulations as BMPs. The State of Oregon has compared Forest Service practices with the State practices and concluded that Forest Service practices meet or exceed State requirements. Site-specific BMPs have been designed to protect beneficial uses. Chapter 2 of the Final EIS lists the design criteria and resource protection measures that are common to all action alternatives. A number of these measures are BMPs. Appendix B of the Final EIS describes the application of water quality BMPs and lists the applicable ones that will be utilized to implement the activities.

The Final EIS documents the analysis of effects to streams listed on the state 303(d) list of Water Quality Limited Water Bodies for summer water temperature. The Little Deschutes River is listed impaired {303(d)} for temperature and dissolved oxygen. For this stretch, the greatest factor affecting those parameters will be shade. Since the project moves impacts away from water, removes no shade, and restores riparian vegetation, there will be a net improvement.

Crescent Creek corridor is also listed as water quality limited. Alternative E would not affect these 303(d) parameters. The 303(d) listing is mainly due to impoundment and flows released from the dam. Water quality standards cannot be met without restoring streamflows. Due to the remote nature of a considerable segment of Crescent Creek, there are very few user-created trails or dispersed camps that have potential to affect these parameters.

Implementation of the selected activities will not result in any measurable increase in water temperatures in any fish-bearing or non fish-bearing perennial stream in the project area. Water temperatures and water quality within the analysis area and downstream into the Deschutes River are not expected to be affected. There will be no change to the 303(d) parameters for which both the Little Deschutes River and Crescent Creek are listed.

With use confined to designated routes, all perennial and intermittent stream crossings will occur on existing Forest Service roads engineered using Best Management Practices. I am confident that Best Management Practices (BMPs) and Standard and Guidelines listed in Appendix B of the FEIS, Resource Protection Measures identified in Chapter 2, along with compliance with local and Regional Soil Quality Standards, will protect beneficial uses of the streams in the project area in a manner consistent with the Aquatic Conservation Strategy outlined in the Northwest Forest Plan, Inland Native Fish (INFISH) and the Clean Water Act of 1972. BMPs have been used numerous times on the Deschutes National Forest in contract provisions and for other similar vegetation management projects and have been proven to be effective in resource protection.

In addition to limiting water crossings to existing Forest Service roads and bridges designed with BMPs, areas that have been traditionally used as dispersed parking and camping will be moved away from the water. These areas will provide amenities for the visitor and continue to provide non-motorized access. Activities associated with route designation (including new trail construction) and staging areas will have an overall beneficial effect to the soil resource by placing the trail in more ecologically suitable locations, allowing natural and management-induced processes to lower the overall footprint of detrimental soil conditions within the project area.

Restoration activities that will occur at the staging area and where user-created motorized access occurs along the river include:

- Decompaction/subsoiling of trails
- Monitoring and hand pulling of invasive plant species

- Planting of native plant material (seeds, live plants)
- Installation of bollards and other structures to block motor vehicle access
- Interpretative signs informing users of restoration activities

Clean Air Act (Air Quality, FEIS, page 436)

The action alternatives affect where motorized vehicles can be legally operated on National Forest lands, and thus could potentially affect the location and concentration of vehicle emissions and fugitive dust resulting from vehicle travel on non-paved surfaces. There may be some increased temporary localized air quality impairment from vehicle emissions and fugitive dust in areas where there is currently a high level of OHV use and motorized cross-country travel. This increased indirect effect on air quality is assumed to be minimal because none of the alternatives are not likely to change the net amount of motorized use across the Forest, and vehicle travel on unpaved surfaces in areas prone to dust, when dusty conditions are likely (late summer months) is not desirable and often discourages users.

There was a thorough discussion of how Alternative E could affect the location of an unplanned human-caused wildfire ignition, which could have a relationship to air quality. Only one ignition attributed to an OHV has occurred on the Crescent Ranger District. Since motorized cross-country travel will be limited, wildfire starts associated with motorized use will be more accessible to suppression resources and potentially more rapidly extinguished, thereby potentially reducing emissions. However, due to the evidence presented in the analysis, human-caused wildfire that could be attributed to starts from OHVs within the designated trail system area is highly speculative and is therefore not uniquely measurable or definable. The potential for any of the alternatives to affect air quality indirectly related to wildfires is predicted to be no change and is therefore not discussed in further detail in the analysis.

In Alternative E, in the Junction segment near the Sno-Park and other staging areas, the opportunity for riders to encounter fugitive dust and associated dust particles with potential to affect human health will be the greatest. Although riders tend to utilize the trail systems during the seasons when dust can be avoided[7], the potential for exposure to dust during the core summer season is the greatest. Motor vehicle travel on unpaved or native surface roads will produce dust but most will settle quickly and close to the trail. Some of the lighter particles will travel higher in the air and farther from the trail, but given the open nature of the trail design and air circulation, these will settle out in relatively short distances. Presently, this increased effect is assumed to be minimal as the dry summer months often discourages users when dusty conditions are more likely.

There may be some localized temporary air quality impairments from vehicle emissions and areas prone to dust. This will be particularly evident in staging area where engines are started and warming up. However, from an airshed perspective, the Three Trails OHV area is 50 miles or greater from the nearest area designated as potentially air quality impaired (Bend, Oregon). Any localized impairment will be diluted to a scale that will be impractical to measure. A projected 2.5 to 5.6 percent yearly increase in riders will not change this condition.

Civil Rights and Environmental Justice (FEIS, page 427)

Executive Order 12898 on environmental justice requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low income populations. The analysis focused on potential effects from the project to minority populations, disabled persons, and low-income groups.

[7] 2009, communication with Vicki Ramming, COHVOPS Program Director

Disparate impact, a theory of discrimination, has been applied to the Three Trails OHV planning process in order to reveal any such negative effects that may unfairly and inequitably impact beneficiaries regarding program development, administration, and delivery. The objectives were to prevent disparate treatment and minimize discrimination against minorities, women and persons with disabilities and to ensure compliance with all civil rights statutes, Federal regulations, and USDA policies and procedures. Alternative E, given the size of potential social and economic effects, is not likely to result in civil rights impacts to Forest Service employees or customers of its program.

Development of the Three Trails OHV Project has been conducted under Departmental Regulation 5600-2, December 15, 1997, and the Council on Environmental Quality's Environmental Justice – Guidance under the National Environmental Policy Act. It was determined that the Three Trails OHV Project and its effect on matsutake production has the potential to affect harvesters from both low income and minority populations. The proposed action, its purpose and need and potential effects have been clearly described, and as mentioned above, scoping under the National Environmental Policy Act employed a variety of approaches to involve citizens, including those identified by the Executive Order, in the planning process. This included on-going consultation with members of the Asian and other affected harvester community.

Providing for effective participation requires innovative approaches. Because mushroom harvesters are of several different ethnic and linguistic backgrounds, signs informing harvesters of meetings were posted in several different languages. Field rangers informed harvesters of meetings. Prior to the release of the Three Trails OHV proposed action and again after site specific actions were presented to the public, translators assisted with communication at the public scoping meetings that were held at the mushroom camp, before and during harvest season. These translators helped overcome not only the linguistic, but also the cultural and institutional barriers that otherwise may have interfered with their participation in the NEPA process. In addition, public meetings were often held late in the evenings after the harvesters had finished their work. Based on historical knowledge, the harvesters indicated areas of high matsutake mushroom potential. This, in addition to botanical surveys, allowed planners to avoid placing trails in the most productive and preferred mushroom harvesting sites. This includes the area west of the 5834 road between Crescent Lake and Two Rivers North subdivision. Also, the trail system was designed to avoid the immediate proximity of the mushroom camp to maintain the social setting and picking areas that are within walking distance.

Although some potential matsutake mushroom habitat will be affected when new trails are constructed due to compaction (which affects fungal mycelia), it will be very small compared to the overall project area and available habitat. In all action alternatives, the Three Trails OHV project will have no noticeable change to the overall matsutake harvest.

Based on the social and economic analysis presented in Chapter 3 of the FEIS, there were no potentially disproportionately high and adverse human-health, environmental, or social effects to minority or low-income populations identified.

Some comments received during the Three Trails OHV planning process expressed concern that changes to motorized access will prevent future access to National Forest system lands for those with disabilities. In response to these comments, a review of the project alternatives has been conducted to ensure that they apply equally to all groups. Therefore, the Three Trails OHV plan is not discriminatory towards persons with disabilities, because it applies equally to all groups.

Under section 504 of the Rehabilitation Act of 1973, no person with a disability can be denied participation in a Federal program that is available to all other people solely because of his or her

disability. There is no legal requirement to allow people with disabilities use of motor vehicles on roads, trails, or other areas that are closed to motor vehicles. Restrictions on motor vehicle use that are applied consistently to everyone are not discriminatory. A more detailed description of the study area demographics is included in the Social and Economic section of Chapter 3 of the FEIS.

CFR 212.5(B) Identification of the Road System and CFR 212.55 (a) and (b) Criteria for Designation of Roads, Trails and Areas
Executive Order 11644 (as of February 8, 1972) Use of Off-road Vehicles on the Public Lands

In accordance with the Travel Management Rule, many stakeholders have been weighing in regarding implementation of that Rule. "The public shall be allowed to participate in the designation of National Forest System roads, National Forest System trails, and areas on National Forest System lands and revising those designations pursuant to this subpart. Advance notice shall be given to allow for public comment, consistent with agency procedures under the National Environmental Policy Act, on proposed designations and revisions (36 CFR 212.52)." I have followed this Rule to the letter and I have detailed the findings. Reference Chapter 3 and consistency with designation of roads and trails (36 CFR 212.55) and Executive Order 11644 (page 456).

Through an interdisciplinary process and numerous public forums with interested and affected citizens, a minimum system was identified that meets applicable statutory and regulatory requirements; as well as reflecting long-term funding expectations. This system was analyzed at the appropriate scale and is reflected in the identified routes and road closures in each alternative that responds to the proposed action and its key issues. An appropriate discussion for each resource identifies the potential adverse and beneficial environmental effects associated with route designation, closure and decommissioning, and maintenance.

The analysis also has a robust summary of resource area findings to satisfy disclosure of designation of roads and trails under CFR 212(55) and for Executive Order 11644.

The Endangered Species Act of 1973, as amended

Biological Assessments have been prepared to document possible effects of proposed activities on Threatened, Endangered, and Federal Candidate species in the Three Trails OHV Project area.

The summary of conclusions for Threatened and Endangered Species and Federal Candidates was that Alternative E **"May Effect, Not Likely To Adversely Affect"** the northern spotted owl and northern spotted owl critical habitat. There will be no activity associated with the Three Trails OHV project occurring within Northern Spotted Owl Nesting, Roosting, and Foraging (NRF) habitat. The project also will have **"No Impact"** on the Oregon spotted frog. For the Pacific fisher, project implementation resulted in a determination of **"Beneficial Impact."**

A detailed disclosure is found on page 160 of the FEIS. Appropriate coordination, conferencing, and consultation with USFWS have been completed and they have concurred with the Forest Service finding for spotted owls and spotted owl habitat (Reference "Consultation/Conferencing with USFWS" in this document).

Other Policy or Guiding Documentation

Compliance with the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (Forest Service et. al 2001,"2001 ROD").

I have reviewed the survey results for species listed and I find this decision to be consistent with the 2001 ROD. None of the roads or trails proposed for closure or new trail construction will impact perennially wet areas that could provide habitat for the Crater Lake tightcoil mollusk. Likewise, none of the roads or trails included as part of the trail system or the development of staging areas traverse perennially wet areas. Based on the level of surveys previously conducted and that no motorized trails will access areas of permanent surface moisture, implementation of any Three Trails OHV action alternatives will have **"No Impact"** to the Crater Lake tightcoil mollusk. Also, great gray owl surveys were conducted in the Three Trails OHV analysis area in 2007 and 2008 with three visits completed each year. There were no detections of the species.

Under Alternative E, there are four segments of new trail construction that fall within the Northwest Forest Plan area. These sites have been visited and based upon the definition in the 2001 Record of Decision, they are not classified as old growth.

From the prefield review, the following have known sites within the project area: *Bryoria tortusa, Buxbaumia viridis, Cantharelles subalpinus, Gomphus bonari, Nivatogastrium nubigen, Ramaria rubrievanescens,* and *Rhizopgon truncatus.* These species do not require pre-disturbance surveys, but require management of known sites. Alternative E will avoid all known sites.

Considering all of the above, I find that no changes need to be made in the proposed action or alternatives to comply with 2001 ROD direction. These findings do not change the environmental consequences specified in the FEIS; therefore there is no need to supplement or revise the Environmental Impact Statement per 40 CFR 1502.9.

The Environmentally Preferable Alternative

Under the National Environmental Policy Act, the agency is required to identify the environmentally preferable alternative (40 CFR 1505.2(b)). This is interpreted to mean the alternative that will cause the least damage to the biological and physical components of the environment, and that bests protects, preserves, and enhances, historic, cultural, and natural resources (Council on Environmental Quality, *Forty Most Asked Question Concerning CEQ's National Environmental Policy Act Regulations*, 46 Federal Register 18026). Factors considered in identifying this alternative include: (1) fulfilling the responsibility of this generation as trustee of the environment for future generations, (2) providing for a productive and aesthetically pleasing environment, (3) attaining the widest range of beneficial uses of the environment without degradation, (4) preserving important natural components of the environment, including biodiversity, (5) balancing population needs and resource use, and (6) enhancing the quality of renewable resources. An agency may discuss preferences among alternatives based on relevant factors, including economic and technical considerations and statutory missions {40 CFR 1505.2(b)}.

Although there is very little difference in the effects for most resources displayed for Alternatives D and E in the Environmental Consequences section, Chapter 3, I have determined that the environmentally preferable alternative is Alternative D for the short- and long-term.

All the action alternatives have relatively similar road densities, with closures to offset the effects of route creation. However, Alternative D goes the farthest in providing more effective mule deer and elk summer range, calving/fawning areas, and migration corridors. To achieve this, the trail system was designed with the condensed, tight loops, retaining the widest possible migration corridors of all the action alternatives. It also avoids Black Rock Pit, further condensing the potential for disturbance. Alternative D goes the farthest in dampening potential for noise to nearby residences by prohibiting motor vehicle use in the Muttonchop Butte pit and moves the play area to a much smaller pit, Quarry #2011.

This alternative was not selected because, as in Alternatives B and C, it does not provide balance between rider's satisfaction and natural resources that I am seeking as described in the purpose and need. The combination of a higher density of trails in this alternative, the most limited Class II mileage of any of the action alternatives, and the limited Class III mileage does not provide for a high quality recreation experience.

Monitoring

I have decided to include monitoring identified on page 59 of the FEIS. Monitoring is a key element in the success we have experienced in management of trail systems in central Oregon. Using agency as well as volunteer personnel, it will be designed to accomplish three purposes: 1) to assure that all aspects of the project are implemented as intended; 2) to determine, for certain critical activities, that the effects of the activities are consistent with the intent; and 3) to allow adaptation if it is found that activities are not having the desired effects.

Day to day monitoring of the system will incorporate a method similar to the Central Oregon Off-Highway Vehicle Operations (COHVOPS) model that has been successful in central Oregon. It incorporates agency personnel and volunteers into an integrated education and enforcement program that monitors elements such as sound testing at staging areas and key locations, and rules related to camping and use of the trail system.

Implementation

Implementation will likely begin in Spring of 2011. I have reviewed the Three Trails OHV Project FEIS and associated appendices. I believe there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of the possible adverse environmental effects that cannot be avoided, and the irreversible/irretrievable commitment of resources associated with the Selected Alternative. I have determined that these risks will be outweighed by the likely benefits. Implementing the Selected Alternative will cause no unacceptable cumulative impact to any resource. The FEIS adequately documents how compliance with these requirements is achieved (FEIS, Chapter 3).

Minor changes may be needed during implementation to better meet on-site resource management and protection objectives. In determining whether and what kind of further NEPA action is required, I will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9(c) and FSH 1909.15, sec. 18, and in particular, whether the proposed change is a substantial change to the intent of the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered

Appeal Rights
The 45-day appeal period begins the day following the date the legal notice of this decision is published in *The Bulletin*, Bend, Oregon, the official newspaper of record. The Notice of Appeal must be filed with the Reviewing Officer at:

Appeal Deciding Officer,
Pacific Northwest Region, USDA Forest Service
Attn. 1570 Appeals
333 S.W. First Avenue
PO Box 3623
Portland, OR 97208-3623

Appeals can also be filed electronically at: appeals-pacificnorthwest-regional-office@fs.fed.us, FAX to 503-808-2339, or hand-delivered to the above address between 7:45 AM and 4:30 PM, Monday through Friday except legal holidays. The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in *The Bulletin* newspaper. The publication date of the legal notice in the newspaper is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

Electronic appeals must be submitted as part of the actual e-mail message or as an attachment in Microsoft Word (.doc), rich text format (.rtf), or portable document format (.pdf) only. E-mails submitted to e-mail addresses other than the one listed above, in other formats than those listed, or containing viruses will be rejected.

It is the responsibility of those who expressed an interest during the comment period and wish to appeal a decision to provide the Regional Forester sufficient written evidence and rationale to show why my decision should be changed or reversed. The appeal must be filed with the Appeal Deciding Officer (§ 215.8) in writing. At a minimum, an appeal must include the following:

1. Appellant's name and address (§ 215.2), with a telephone number, if available;
2. Signature or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal);
3. When multiple names are listed on an appeal, identification of the lead appellant (§ 215.2) and verification of the identity of the lead appellant upon request;
4. The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;
5. The regulation under which the appeal is being filed, when there is an option to appeal under either this part or part 251, subpart C (§ 215.11(d));
6. Any specific change(s) in the decision that the appellant seeks and rationale for those changes;
7. Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;
8. Why the appellant believes the Responsible Official's decision failed to consider the comments and;
9. How the appellant believes the decision specifically violates law, regulation, or policy.

Contact Persons

For additional information concerning the specific activities authorized with my decision, you may contact:

Joan Kittrell
IDT leader
Crescent Ranger District
P.O. Box 208
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(541) 433-3200

Holly Jewkes
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P.O. Box 208
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Responsible Official

JOHN ALLEN
Forest Supervisor
Deschutes National Forest

12-20-10
Date

Appendix A – Resource Protection Measures and Monitoring

I have decided to implement all resource protection measures described for Alternative E in the FEIS (page 53) and I am confident these measures will adequately prevent adverse effects for the following reasons: 1) the selected measures are practices we have used successfully in the past and 2) they are based on current research. These measures will be implemented through project design and layout, contract specifications, contract administration, volunteers vested in a successful outcome, and monitoring by Forest Service officers.

Project Design Features

To enhance rider's experience and safety

1. All trails will be designed with safety in mind by incorporating techniques such as curves, turns, and obstacles that discourage excessive speed.

2. In the Junction segment, access to the snowmobile underpass (off 6000-625 spur) will be provided.

3. An underpass on Hwy 97 south of the junction of Hwy 97 and Hwy 58 will be constructed to allow safe OHV passage connecting Rivers and Walker areas. This underpass will be designed to include connectivity of wildlife habitat. This will be phased in when funding is attained. A Wildlife Biologist will work in conjunction with state highway engineers to design an appropriate underpass system to accomplish objectives.

4. For safety, there will be a railroad crossing provided off the 5825-260 spur near the Two Rivers North subdivision.

5. For aviation safety, the Crescent Lake Airport is not used for OHV routes.

6. In the Junction segment, connections to the local businesses at Crescent Lake Junction are provided by a shared-use portion of the Metolius-Windigo Horse trail from the snowmobile underpass to the 60 road for approximately a two mile segment of trail. This segment is very limited in options and all uses must share the only safe undercrossing at Highway 58; therefore the trail will be designed and signed to accommodate both motorized and non-motorized uses as much as possible while providing safety and water quality proximate to wet areas near the railroad tracks.

7. Action alternatives have located all staging areas and most trails away from the Two Rivers North subdivision.

8. In order to provide access to the Simax Group Campground at Crescent Lake, a connection will be provided with an OHV trail out from Simax Group Campground to connect to road 6015.

9. To provide access to the Little Deschutes River, there will be a designated native surface day use parking and non-motorized trail provided.

10. To provide access to a popular user-created motorcycle single track trail called the "10-mile loop," incorporate into the Rivers segment utilizing existing trail, closed roads, and some new trail construction.

To ensure matsutake production

11. Information obtained during the scoping period from those who advocate matsutake (mushroom) production and harvesting will be utilized during layout of the trails (and prior to trail construction) to avoid, where feasible, matsutake, and sugarstick (*Allotropa virgata)* plants. (The latter species is used as an indicator for matsutake when the mushrooms are not fruiting). A botanical survey will be conducted by a botanist prior to any new trail construction to avoid these two plant species.

To protect botanical resources

12. In areas near fens or wetlands, structures such as split rail fencing and boulders will be utilized to define the boundaries of the designated trail system (TE-4).

For big game habitat effectiveness

13. After consideration of access for activities such as recreation, mushroom harvesting, and administrative use (including fire suppression), approximately 218 miles of legacy roads inherited from a land exchange, formerly used for intensive harvest practices, will be closed to motorized use in the Northeast corner of the Walker segment. This segment includes a very high density of roads that generally are located on acquired lands that were formerly managed for industrial forestry. These roads have been in a special status without a maintenance strategy assigned. This project, using a roads analysis to be informed, took advantage of an opportunity provided by an integrated analysis from a landscape scale.

14. To offset a potential decrease in availability to an existing wildlife guzzler, a new guzzler will be placed off the 9755-195 road on Walker Rim.

15. The Walker Green Dot Cooperative Road Closure Agreement will remain in effect during the fall deer rifle hunting season. All motorized use, including OHVs, are restricted to utilizing only those roads posted with a "Green" Dot.

16. OHV travel off designated roads and trails will not be permitted for any reason, including big game retrieval during the hunting seasons.

17. To the greatest extent possible, OHV trails will be routed away from all water sources to minimize disturbance to maintain water quality and wildlife habitat.

18. To the greatest extent possible, OHV trails will be routed away from big game hiding cover patches to maximize big game habitat effectiveness.

19. The boundary of the Hemlock Key Elk Area (KEA) will be adjusted to incorporate more wet meadow habitat and reduce the open density as compared to the existing condition. There will be no change in the amount of acreage allocated as KEA.

To protect other wildlife

20. There will be no OHV trails constructed that will traverse lava pressure ridges and/or lava flows such as the Black Rock lava flow south of Hamner Butte (WL-65).

21. Active nest sites will be protected from disturbing activities within one quarter mile of nest by restricting site disturbance during periods of nesting. Disturbing activities will vary site specifically. Should a nest be encountered, an evaluation of potential disturbance will be performed by a biologist prior to planned activities (Forest Plan, WL-3, WL-33, WL-38).

22. Snag removal will be limited to danger/hazard trees along the trail and in staging areas.

Table 1. Seasonal Restrictions on Trail Construction and Maintenance Activities near Active Nest Sites, Wolverine Dens, and Big Game Calving/Fawning Habitat (Forest Plan, WL-3, WL-33, WL-38)

Species	Buffer Distance	Restricted Season
Northern spotted owl (nest)	¼ mile (most activities) or ½ mile (helicopter operations)	March 1–August 31
Northern bald eagle (nest)	½ mile (line-of-sight) or ¼ mile (non line-of-sight)	January 1–August 31
Bald eagle (winter roost)	To be determined by a district wildlife biologist	November 1 – April 30
Goshawk (nest)	¼ mile	March 1- August 31
Osprey (nest)	¼ mile	April 1 – August 31
Red-tailed hawk (nest)	¼ mile	March 1 – August 31
Sharp-shinned hawk (nest)	¼ mile	April 15 – August 31
Cooper's hawk (nest)	¼ mile	April 1 – August 31
Great gray owl (nest)	¼ mile	March 1 – June 30
Great blue heron (nest)	¼ mile	March 1 – August 31
Wolverine (den)	2 miles	February 1 – May 30
Deer and Elk (fawning/calving habitat)	To be determined by wildlife biologist	May 1 – June 30

For soil and water quality[8]

23. Wherever possible, all trails will be located to overlay existing snowmobile trails, existing user-created trails, and/or areas where vegetation and soil may be previously disturbed.

24. In order to maintain soil quality and to ensure maintenance of a quality trail riding experience, season of use will generally be from May 1 through October 31 and will be dependent upon site specific conditions (BMP R-3).

25. All routes and staging area will be designed and located to minimize erosion by maintaining proper drainage systems (BMP R-18, R-19).

26. Tread hardening systems (e.g. angular three inch diameter quarry rock), or materials and treatments that will achieve the same goal of protecting the tread will be installed wherever tread grade is less than two percent and water tends to pool (BMP R-3, R-6).

27. New trail segments will not be constructed directly up steep slopes. Sustained grades will not exceed 12 percent, and the maximum trail grade of any trail segment will not exceed 30 percent. This will reduce the capacity of the trail to capture and channel runoff (BMP R-3, R-6).

28. All trail construction in or near wet areas will be avoided, wherever possible. When unavoidable, install wooden puncheons (an artificial tread elevated above the ground) across wet or swampy areas (BMP R-3, R-6).

[8] Additional Project Design Features common to trail construction are found under the heading "Operation and Maintenance Guidelines" in Chapter 3.

29. Downed wood cleared to create the trail tread will remain onsite and positioned to discourage OHV users from straying off the designated trail tread (BMP R-1).

30. Very little trail construction will occur within riparian reserves. However, when unavoidable, all existing large woody debris will be retained within riparian reserves to provide nutrients and food to aquatic plants and insects, and provide terrestrial buffering to retard sediment-rich runoff from entering the stream network (BMP R-1).

31. All rehabilitation work areas will be revegetated with native species following disturbance. Erosion filtering fencing will be placed to control offsite movement of soils in rehabilitation areas adjacent to perennial streams (BMP R-9).

32. All routes and staging area will be designed and located to minimize erosion and potential sedimentation with drainage systems designed for the appropriate location and maintained over time. They also will be well away from surface water to prevent potential contamination from hazardous materials (BMP R-1).

33. Wood fencing or other similar structures will be used to contain the area of activity at Muttonchop Butte and retain the current vegetation (BMP R-1).

To protect cultural resources

34. If, during trail construction, any cultural artifacts or features are discovered work will be halted until an archeologist can review the site (CR-2, 36 CFR 800.13).

35. Where a road is converted to trail through a site, the narrowing of the trail will be accomplished by methods that maintain the integrity of the site below the surface of the road bed (36 CFR 800.13).

For invasive plant prevention

36. Actions conducted or authorized by written permit (contracts) require cleaning of all heavy equipment (i.e., bulldozers, skidders, and other construction equipment) prior to entering National Forest lands (Forest Plan Standard from Invasive Plant ROD, 2005).

37. All Forest Service employees will inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and personal equipment prior to leaving a project site infested with weeds (Forest Plan Standard from Invasive Plant ROD, 2005).

38. Inspect gravel, fill, sand stockpiles, quarry sites, and borrow materials for invasive plants before such material is transported and used within National Forest lands. Only gravel, fill, sand, and rock that are certified to be weed-free will be used within the project area (Forest Plan Standard from Invasive Plant ROD, 2005).

39. Only certified weed-free straw will be used when mulching material is required for trail and road rehabilitation projects (standard prevention practice).

40. Native seed and plant materials will be used for all restoration and rehabilitation projects (standard prevention practice).

41. Any OHVs used for trail construction will be free of mud, dirt, and plant parts prior to entering the project area (Forest Plan Standard from Invasive Plant ROD, 2005).

To address noise as an annoyance

42. Install and enforce a quiet time for the Muttonchop Pit Play Area similar to developed campgrounds (usually 10 pm – 6 am).

For public safety and scenery

43. Smoke and smoke drift from prescribed maintenance burning has potential to overlap the Three Trails OHV designated trail system. If that occurs, portions of the trail system will be closed on burn days due to reduced visibility and exposure to prescribed burning operations. Public notification will include information on the central Oregon website, signing, and presence of field rangers at staging areas and affected trail systems until the hazard is abated.

44. Timber harvest and activities associated with timber haul has the potential to overlap the Three Trails OHV project area. If this occurs, portions of the trail system and shared use roads may be temporarily closed during operational periods of the timber harvest (such as felling and hauling operations) for a period up one year. Public notification will include information on the central Oregon website, signing, and presence of field rangers at staging areas and affected trail systems until the hazard is abated.

45. In order to assure scenery is maintained along major travel corridors, maintain visibility of riders, staging areas, and designated routes as subordinate to the surrounding landscape. During on-the-ground layout of trail system and routes, take advantage of vegetation screening and topography. Ensure all routes that may be visible are perpendicular in order to minimize the time seen on major travelways (M18-18, M18-23).

46. A mixed use analysis for sharing all potential motorized traffic has been performed to establish the suitability of allowing mixed use on roads in the context of their current setting in terms of alignment, width, typical user speed, and presence or absence of traffic control devices. On all shared use routes within the Three Trails Project area, confirmation signing for the presence of OHVs would be installed.

Mitigation Measures for Alternative E

The following mitigation measures are an integral part of Alternative E. These are different from Project Design Features in that they are typically tied to a specific route, trail or location and they are used to avoid, minimize, rectify, reduce, or compensate an impact (40 CFR 1508.20). They are listed here separately to avoid repeating them in each alternative description.

The effectiveness of each measure is rated at high, moderate, or low to provide a qualitative assessment of how effective the practice will be in preventing or reducing resource impacts. These mitigation measures and design elements are considered in the effects discussions of the FEIS, Chapter 3.

Effectiveness ratings of High, Moderate or Low are based on the following criteria: a) Literature and Research, b) Administrative Studies (local or within similar ecosystem), c) Experience (judgment of qualified personnel by education and/or experience, d) Fact (obvious by reasoned, logical, response).

High: Practice is highly effective (greater than 90 percent), meets one or more of the rating criteria, and documentation is available.

Moderate: Documentation shows that practice is 75 to 90 percent effective; or logic indicates that practice is highly effective, but there is no documentation. Implementation and effectiveness of

this practice needs to be monitored and the practice will be modified if necessary to achieve the mitigation objective.

Low: Effectiveness is unknown or unverified, and there is little or no documentation; or applied logic is uncertain and practice is estimated to be less than 60 percent effective. This practice is speculative and needs both effectiveness and validation monitoring.

To protect wildlife habitat

47. To offset a potential decrease in wildlife use of the Little Walker Mountain guzzler due to designation of motorized use nearby, a new guzzler will be installed on Walker Mountain. The new guzzler will be installed near the end of National Forest System Road 9755-195. The Little Walker Mountain guzzler will remain in place and continue to be maintained. *High*

48. Due to the sensitive nature of unique wildlife habitats within it, Black Rock lava flow will be prioritized for education, monitoring, and enforcement to ensure riders stay within the confines of the trail tread (WL-65). *Moderate*

To maintain soils and water quality

49. During trail layout and prior to trail construction, where trail designation overlaps a former timber sale unit that has been completed within the last 20 years, it will be monitored for meeting soil quality Standards and Guidelines. If the unit is found to be below 80 percent in a productive state, avoidance or restoration activities will be utilized. In the area of overlap area, the objective is for the combination of the trail and the unit to be consistent with Regional policies and Forest wide Standards and Guidelines for soil quality (SL-1, SL-3). *High*

50. All fuel-powered vehicles and tools will be refueled at least 75 feet from any live stream (RP-2, Clean Water Act). *High*

To protect botanical resources

51. To assure protection of a sensitive plant species near the Bonneville Power Administration powerline designated route, annual monitoring and structures such as split rail fencing will be used to define their habitat prior to implementation of the trail segment (TE-4). *High*

To protect cultural resources

52. Incorporate data recovery (*High*), protection (*Moderate*), and/or avoidance (*High*) in eligible and unevaluated cultural resource sites (CR-2, 36 CFR 800.13).

53. To protect cultural resources in roadbeds converted to trails that cross eligible or unevaluated sites, use methods to narrow routes that do not involve ground disturbance. These include placement of barriers consisting of downed woody material perpendicular to the designated route, limiting the amount of limbing of overhanging branches, or defining the width of a trail using fallen trees (CR-2, 36 CFR 800.13). *Moderate*

54. Unless limited by topography, place trail drainage features outside of site boundaries to prevent unnecessary site damage (CR-2, 36 CFR 800.13). *High*

55. Definition of parking and staging areas within known eligible or unevaluated sites will be coordinated with an Archeologist to limit potential loss of site artifacts and features (CR-2, 36 CFR 800.13). *High*

56. All rehabilitation ground disturbing activities will occur where there will be no effect to eligible historic properties. Other rehabilitation activities will use appropriate non-ground disturbing methods such as above ground barriers and shallow rooting of vegetation (CR-2, 36 CFR 800.13). *Moderate*